DOCUMENT RESUME

ED 093 827 SP 008 193

TITLE	Curriculum Improvement in Secondary School Physical Education.
INSTITUTION	American Association for Health, Physical Education, and Recreation, Washington, D.C.
PUB DATE	73
NOTE	106p.; Proceedings of the Regional Conference of the American Association for Health, Physical Education, and Recreation (Mount Pocono, Pennsylvania, November 1971)
AVAILABLE FROM	American Association for Health, Physical Education, and Recreation, 1201 16th Street, N.W., Washington, D.C. 20036 (No price quoted)
EDRS PRICE	MF-$0.75 HC Not Available from EDRS. PLUS POSTAGE
DESCRIPTORS	Conferences; Curriculum Design; *Curriculum Development; Educational Environment; *Physical Education; *Secondary Schools; Secondary School Teachers

ABSTRACT

This document is the result of a curriculum conference on secondary school physical education in the Northeastern United States, held specifically for secondary school physical education teachers. The document is composed of papers presented at the conference and some brief information about the conference itself. The order of presentation of the papers in this document is intended to identify the following primary aspects of the curriculum process: a) the need for understanding the context of education as it pertains to our society prior to focusing on developing curricular insights for particular fields of study, b) the need for providing a rationale and purposes as the basis for decision making and designing curriculum, and c) the need for evaluation. The papers in this document are as follows: "Curriculum and Humanistic Education: Monolism vs. Pluralism"; "Physical Education Objectives Out of Curricular Chaos"; "Rationale and Purposes for Physical Education"; "On Considering Curriculum Design"; "Evaluation: The Program and the Person"; "Where Are You Going? What Are You Going to Do?" and "Bibliography for Pre-Conference Encounter." (JA)

ED 093827

CURRICULUM IMPROVEMENT IN SECONDARY SCHOOL PHYSICAL EDUCATION

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL BY MICROFICHE ONLY HAS BEEN GRANTED BY
AGH
TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE NATIONAL INSTITUTE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER.

Proceedings, AAHPER Regional Conference
November 4 - 6, 1971
Mount Airy Lodge, Mount Pocono, Pennsylvania

SP008 193

Copyright 1973

American Association for Health, Physical Education, and Recreation

A National Affiliate of the National Education Association

1201 Sixteenth Street, N.W.
Washington, D. C. 20036

CONTENTS

Introduction v

ARTICLES

Curriculum and Humanistic Education: Monolism vs. Pluralism 1
Bruce R. Joyce

Physical Education Objectives Out of Curricular Chaos 39
Ann E. Jewett

Rationale and Purposes for Physical Education 61
Jan Felshin

On Considering Curriculum Design 67
Deidre Burnstine

Evaluation: The Program and the Person 75
Norman Sam

Where Are You Going? What Are You Going to Do? 85
Tom Evaul

Bibliography for Pre-Conference Encounter 97
Donald A. Read

Conference Reaction Tally 101

Request for Continued Interaction 103

INTRODUCTION

In the Fall of 1970 a meeting was held at East Stroudsburg, Pennsylvania to discuss the feasibility of conducting a curriculum conference on secondary school physical education in the northeastern United States specifically for secondary school physical education teachers. The resulting conference, held on November 4-6, 1971, was sponsored by the Secondary School Physical Education Commission of the Physical Education Division of AAHPER. The Eastern District Association of AAHPER and the Pennsylvania Association for HPER offered their support as cosponsors.

The program was designed to explain a process for developing curriculum which would provide a framework and a vehicle for assessing each participant's own curricula.

The order of presentations in the monograph is designed to identify the following primary aspects of the curriculum process:

1. Need for understanding the context of education as it pertains to our society prior to focusing on developing curricular insights for particular fields of study. Bruce Joyce in "Curriculum and Humanistic Education: Monolism vs. Pluralism" and Ann Jewett in "Physical Education Objectives Out of Curricular Chaos" address themselves to these issues.

2. Need for providing rationale and purposes as the basis for decision making and designing curriculum. In Jan Felshin's presentation, "Rationale and Purposes for Physical Education," and Deidre Burnstine's "On Considering Curriculum Design" these topics are discussed. (Conferees were provided an opportunity to test personal perspectives on rationale and purposes for physical education curricula.)

3. Need for evaluation. Norman Sam in "Evaluation: The Program and the Person" provides insights into this particular process. Thomas Evaul closed the conference with a presentation entitled "Where Are You Going? ... What Are You Going To Do?"

A desirable interplay between theory and practice was evident throughout the conference. Conference evaluations completed by the participants indicate that the experience was well received and valuable. It is our hope that in reading this monograph the aspects of the curriculum process will be evident and the excellent individual contributions of each of the presentors will be appreciated.

Thanks and gratitude are extended to each of the many individuals who contributed to the success of the conference.

William J. Penny
Conference Director

CURRICULUM AND HUMANISTIC EDUCATION: MONOLISM VS. PLURALISM

Bruce R. Joyce
Teachers College, Columbia University
New York, New York

To plan for humanism at all may seem to be a paradox; at first blush deliberate unplanning or "decivilizing" may seem a more likely avenue to create an environment in which gentle self-actualization can take place.

Not to plan for humanistic growth, however, is to give the field to the Philistines on one hand and the accidents of "natural" societal forces on the other. I do not know which is worse. The Philistines would regiment children to economic purpose - and they will plan, and powerfully, a social system which reduces man to an economic entity and cultivate in children a utilitarian philosophy which will emasculate their humanitarian potential. The "natural" forces of society would mindlessly overpopulate the world and gather men into inward-looking social groups, national and tribal, unable to cope with the scale of problems generated by worldwide social forces. The resulting crises would force men into a collective materialism which might preserve life but would eschew humanistic development.

So plan we must, and in education it is the curriculum planner whose task it is to generate a field of humanistic planning. Although most curriculum theorists of this century would classify themselves as humanists and many are well aware of the forces mitigating against humanistic curriculum planning, such a field has not emerged to become a powerful force in education. Hence this paper will present an analysis of the reasons why the curriculum field has not succeeded in humanizing itself and will present a platform which I believe offers realistic humanistic direction to the field. A simpleminded definition of the humanists' objectives will be assumed throughout as the focus of the work of the humanist in curriculum. This definition sees humanism in terms of two interacting, mutually dependent dimensions. Stated as goals of curriculum planning these are:

1. To create environments which enable individuals to actualize themselves on their own terms - emotionally, intellectually, and socially.

2. To create environments which help people reach each other and live with an expanding common consciousness - one which not only embraces the traditional liberal values of mutual respect and protection of the rights of others, but also reaches out to explore the development of expanded human experiences through new dimensions of relationships with others.

Both of these objectives assume that the child will have to learn to help shape a new type of human society which embraces possibilities of personal and social development rarely achieved in our present human community.

The possibility that curriculum planning can actually relate to such goals derives from the critical relationship between education and society. A human culture can be described as an elaborate set of problem solutions. Some of these solutions are addressed to physical problems (as hunger and cold) and it is toward these that our economic and technological systems were originally developed. Other problems consist of meeting emotional needs and some aspects of families and some modes of interpersonal interaction help to solve these for us. For each of us the culture largely defines the way we see problems and solutions, and also enables us to share reality with other humans. That is, those of us who share the same culture tend to see things in similar ways and to respond similarly to other human beings, although there is of course a wide individual variation within any cultural pattern. [1]

A culture is never complete. It is in continuous need for regeneration and reorganization. Within every culture there are certain problems that have never been defined adequately, and certain others for which there are no solutions, even though there are definitions. Within complex cultures such as ours, there is at all times a multitude of problems begging for help. Formal education systems have a potentially dynamic social role as a direct result of the incomplete and imperfect nature of the existing culture - the existing solutions to problems.

This opportunity exists, obviously, because education is a major agent in the transmission of culture. It fulfills the exceedingly important function (shared with other socializing agencies) of giving us humaneness, and transmitting to us a technology on which we can stand as we face the problems of human existence. Our present bureaucratic educational institution bids well to become increasingly effective at transmitting the general-purpose skills of the culture (especially reading and mathematics) and this is a role I would not want to undersell under any circumstances.

(I am not against using the existing culture, although I do not believe it is perfect.) However, the great dynamic challenge of the future is to develop entirely new modes of education, designed to help people create new solutions to problems, and to define problems that were not perceived before at all. Equally important, in a time when culture is growing ever stronger and more powerful, and society is more urbanized and alienated, is to produce modes of education which can help people make contact with each other in new and stronger ways, and can help individuals to create lives which are unique, uniquely fulfilling and socially productive, even transcendentally cooperative.

Since the most visible and theoretically powerful leaders of the education community (John Dewey is the classic example) are well aware of the possibility of such goals and have been committed to some form of them, we have to ask ourselves why the field has not learned to create schools devoted to humanistic goals on any wide scale. (There are some, but a pathetic minority.) Let us look at the field and its trends, and see what we can discern.

The Curriculum Field

The curriculum worker is part of a large cadre of persons who deal with educational planning, the training and supervision of educational personnel, and the development of educational materials. The collectivity of these persons, their expertness, and their activity constitute the curriculum "field." On the whole, curriculum workers engage in four kinds of activity: they plan educational programs, develop systems of instructional materials, train teachers, and supervise them. As any other worker, the curriculum specialist is greatly affected by the condition of his field.

The curriculum field is still relatively undefined. Curriculum planners have no agreed-on set of concepts or modes which are known and used by all hands. There is no lack of "prescriptive" curriculum theories--that is to say, ideas about what school programs ought to be. Nor is there any lack of curriculum.[2] On the contrary, there are a great many curriculum plans and a huge quantity of instructional materials built around curriculum plans. School districts, publishers, research and development centers, and others create curriculum plans and/or materials, train teachers, and build evaluation systems. This mass of activity is conducted by people who use a great variety of procedures. Most curriculum creators use intuitive procedures while some use highly self-conscious "systems" procedures. They also vary in the implementation devices and strategies they use. Some rely on

curriculum guides as their chief vehicle, others use instructional materials, and still others use teacher training. Curriculum builders also differ in their view about freedom and control in curriculum matters. Some would create master man-machine systems in which rational decision-making procedures are administered by technocrats, teacher-technicians, or professional managers.[3] Others would give classroom teachers the central decision-making roles.[4] Still others would provide students with the central curriculum-making role.[5] A few curriculum specialists envision variations on all these, depending on what goals are to be sought.

The curriculum field has no overarching "metasystem," known to all or most of its practitioners, which enables comparison and choices between all the alternatives. On the whole, however, curriculum planners "do their own thing." For instance, systems planners build and test instructional systems while child-centered educators develop reflective teaching procedures and group dynamics experts refine sensitivity training procedures. Generally the representatives of different persuasions do not talk to each other on a regular basis about the nature of the field.

Curriculum specialists of all types do have one thing in common: they have been coopted into the service of a bureaucratic, monolithic, largely dehumanized educational system and unless they change their orientations radically they will be unable to work for humanistic ends.

The curriculum worker has been bureaucratized by the same processes which have dehumanized functionaries in other social institutions throughout complex societies of the world. He has, in other words, increasingly become a servant of a system, largely impersonal in nature, which serves primarily to teach children the technological culture, and to fit them into the economic and status systems of the society. Although this institutional system is politically organized as many relatively small school districts, schooling throughout the United States and much of the rest of the world is actually so similar that we have essentially one large national system, that increasingly looks like one large international system as the eclectic world culture becomes more dominant, and the technologies of education become more widespread and homogeneous. It is not entirely outlandish to compare the giant education bureaucracy with the postal system, except that instead of taking mail from one place to another, it receives people when they are young, and delivers them when they are young adults, into the adult economics family and the social and political systems. As in the case of the postal system, things are delivered much as they are mailed. In education it is the characteristics of

the children and their parents that account for the character of the delivered product.

The technologies (technology is used in the broadest sense to include scientific theories, the lore of practitioners, educational methods, and educational engineering) of curriculum development, instructional materials development, supervision, and teacher training, the four domains of the curriculum worker, have all reflected the progressive bureaucratization of education. Curriculum development, despite a paradoxical concentration at the theoretical level, on personal and democratic processes,[6] has been concerned with the planning and management of instructional systems and has increasingly turned toward the development and evaluation of system implementable on a national or international scale. Instructional materials development has been concerned with the improvement of devices designed to implement particular kinds of curriculums and to do so efficiently and economically. Efficiency usually is best served by wide implementation of standardized materials and these have, indeed, dominated the educational scene (the textbook, primarily).

The functions of the curriculum supervisor have become regulatory in every bureaucratic sense, and in most school districts, supervisors and teachers are separated from each other by a wide gulf of function. In many cases they keep a distance that tends to perpetuate the bureaucratic nature of their relationship, and minimize spontaneous, creative encounters between them. (Another paradox, since most supervisory theory also stresses democratic procedures and enhancing the uniqueness of individual teachers.)[8] Teacher training, operated chiefly by curriculum specialists, has leaned most heavily on student teaching, which is essentially an apprenticeship mode, designed to socialize the young teacher into the organizational patterns of the existing educational system, and the roles of functionaries in that system.[9]

Present forces appear to be accelerating and sophisticating these trends. Content is gradually becoming more academically sophisticated, and instructional systems are now being developed which should be far more effective in efficiency, both from the point of view of the system, which wishes them to have a higher output, and in terms of the learner, whose characteristics they will accommodate more efficiently. Cost accounting procedures are being introduced into education, not only with respect to economic factors, but with respect to the assessment of alternative educational procedures.[10] Increasingly, commercial firms are being drawn on to develop instructional materials development, evaluation systems, and cost accounting procedures. PERT procedures and PP&B

procedures are being borrowed from the military-industrial complex and brought into the educational arena at an accelerating rate.[11]

In short, we are moving rapidly toward an industrial model of education, which is probably more efficient but even more bureaucratic in character than the inefficient model it is replacing. Even the recent humanistically oriented critics of schooling, Leonard,[12] Kohl,[13] Coles,[14] Kozol,[15] and others, while they have not been without effect, have been responded to in many quarters with the assertion that the ills they point to can be cured by making the system more efficient rather than by changing it in any fundamental way.

The curriculum specialist operated under many seemingly humanistic assumptions which coopted him to the service of the school bureaucracy. For one example, the curriculum field assumed that it is the teacher in this school who should have the initiative in matters of curriculum and instruction. Curriculum guides should suggest, but not control.[16] The community should be involved in all matters affecting their children. Cooperative planning should insure the inclusion of the student. The local educational authority, the neighborhood school, the child's teacher, and the child himself are the center of power. The job of the curriculum specialist is to facilitate decision making by these individuals. The field is to set before them the alternatives and the implications of the alternatives. The teacher was to be responsible and accountable, but he was to be thought the professional in charge. To violate his freedom would be a violation of professional ethics. This assumption neatly boxed the curriculum field inside the limitations of the average teacher. If he did not know mathematics, or did not want to teach it, the field was stuck firmly on the horns of a dilemma, for had it not defined him as the center of power? If he would not or could not teach inductively, the field was in the position of having argued that his was a world of free choice. He should create his own style, and if that style did not include induction, or an idea-orientation, or any other desirable element, no doubt his style provided its own compensation for his students. The student-teacher relationship had become sacred.

The curriculum field has made unwarranted assumptions about that school and those teachers. It was assumed that the social system of the school is democratic, and that the teacher wanted the responsibility for final curricular decisions. Thus, the curriculum field was then forced to live at the technical level of the local school (which prevented it from recommending anything requiring a high level of technical capacity, or a fundamental knowledge). In addition, the schools simply have not very often operated in a style remotely approaching democracy, and most

teachers did not want the responsibility which was thrust upon them.[17] (Not infrequently, curriculum theorists have railed against the textbook, told the teacher he was free, only to find him busily selecting another text.)[18]

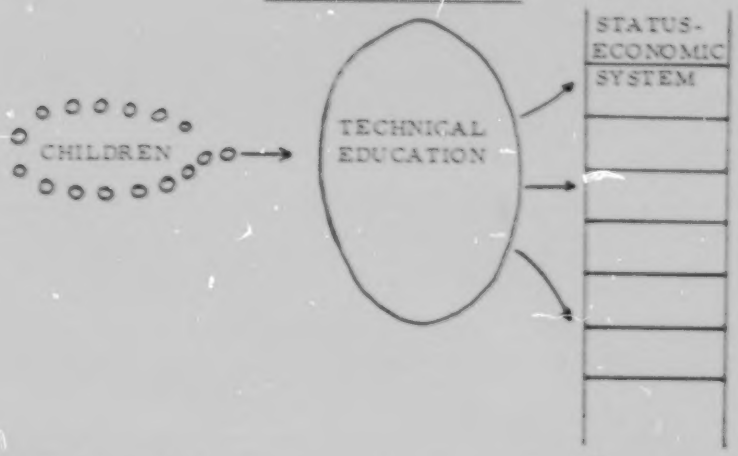
Gradually, the curriculum field assumed the more or less perpetual existence of the present curriculum areas because through those areas it could relate to the teacher. From time to time new ones were invented in order to pull the teachers toward different types of behavior. For example, the social studies and the language arts were invented to promote greater integration of subject matter and a more lively, problem-solving approach to instruction. Probably the most effective curriculum workers specialized in curriculum areas, because as long as one worked inside a curriculum area, he could affect the school if he were able to affect the instructional materials that went into it. Thus, as the mathematical content of textbooks was changed, those textbooks slowly taught the teachers, and slowly pulled them toward new methods. If textbooks changed too quickly, teachers had trouble with the material and rejected the innovation, but so long as curriculum specialists followed a policy of gradualism, they could actually make some minor changes. Thus it is, that the most prominent members of the curriculum field (and by far the richest) engage in the production of instructional materials.[19] Unfortunately, as the curriculum field became tied to the curriculum areas more was lost than gained, in terms of educational effectiveness, for as those areas have lost validity, we have not been able to replace them. Thus, although most schools pay little attention to the creative and performing arts, education for greater interpersonal sensitivity, philosophy, and international concerns, among others, and although major efforts have been devoted to remedying this, it has been very difficult to change since so much effort has been committed to the established areas.

By far the most paralyzing effect of the bureaucratic assumptive world in which the curriculum specialist lived was that it tended to filter out all ideas which might have improved education but fit awkwardly into the school pattern. Because the curriculum developed assumed the school and assumed the teacher, he tended to confine himself to recommendations that were in the teacher's terms, or in the school's terms. He did not learn how to create different kinds of educational institutions embracing activities much different from the norm.

There is a sad paradox in this story. For most of this century the most active curriculum planners worked in an assumptive world which gave great prominence to a humanistic democracy. After Dewey[20] they assumed that the school and the classroom operated as a democracy in

which teacher and children worked together to apply the scientific method to the betterment of society.[21] This practicing democracy would attend carefully to the needs of its members and to preparation for the active citizenship needed to develop a more humane and responsible society. That such a humanistic platform should be coopted by bureaucratic functionaries is both paradox and tragedy. Were it not that the existing school became coopted by the status system, and, hence, the economic system, the effects might not have been so bad. As it was, the school became the servant of the status system and the curriculum worker, the servant of the school, went along with the package.

The Monolithic School



The situation has been most dramatically expressed by Edgar Z. Friedenburg in Coming of Age in America.[22]

Friedenburg argues that an open society, one in which status hierarchy can be penetrated by an upwardly mobile individual, and a society which also is technological, in which status derives partly from technical achievement and capacity, places enormous pressure on youth. If they are to rise in status (or to maintain the status of their parent, if they are middle class) then they must become technically proficient. As they drive themselves toward technical proficiency, they find that they are using themselves as instrumentalities. That they are seeking their education, not for greater growth, but for the instrumental value it will have, and they are spending their youth, not on the development of their individualization and humanistic potential, but on homogenizing themselves in a technical way, so that they can benefit from the possibilities

of upward mobility. Furthermore, they are locked early into a competitive system, which pits them against their peers, and makes their studies an instrument, not of cooperation, but of relative success-potential. By permitting itself to be locked into the vocational system, the school has come to be almost completely dominated by the status system. Its academic studies have been turned almost entirely into instrumental rather than intrinsic currency, and academic preparation has become the avenue to economic opportunity. Its practical studies have become a second track for the non-mobile. The effect of the status-orientation of the school has been to alienate many large groups from it. The consequences of poor preparation at one level carry such a heavy economic penalty, because of the doors that are shut at the higher levels, that the academically unswift are alienated (if not destroyed) by the system. Since academic ability and social class are positively related, another effect has been to destroy the confidence of lower caste and class members in the very scholastic system that seemingly has proffered escape from the bottom of the opportunity-barrel, and then denied escape because of the way it was locked into the opportunity-system.

The curriculum field specifically has been coopted by the status system in a number of ways. First, it has learned to speak the language of sequence, prerequisite and mastery. Curriculum guides can scarcely be written in such liberal terms that they do not seem to imply that the studies listed for the younger children are essentials for the preparation for the work to be given the older children. (The status ladder becomes an academic ladder!) Separate curriculum areas for vocations, for commercial preparation of girls, for college preparation, have appeared and are rationalized by the field. Evaluation has become a high art, and the curriculum field abounds in ways that evaluation can be used, within curriculum frameworks, to reinforce and extend status differences.[23] The languages of curriculum are those of academic status-seeking (consider: "modes of inquiry," "structure of the discipline," "behavioral evidence").[24]

For the curriculum field it is probably even more devastating that the status implications of progress in schooling have created such enormous pressure that it is very difficult to bring about any kind of curriculum change unless the public is satisfied that it will not affect the status probabilities for their own students. If we try to change a mathematics curriculum in one suburb, for example, the parents will be afraid that the change will be reflected in Educational Testing Services activities and that their children may be disadvantaged compared with those students from another suburb whose curriculum might be admittedly less relevant to the students and the times, but might be more relevant to the examinations on which the gateways to status so heavily depend. The curriculum

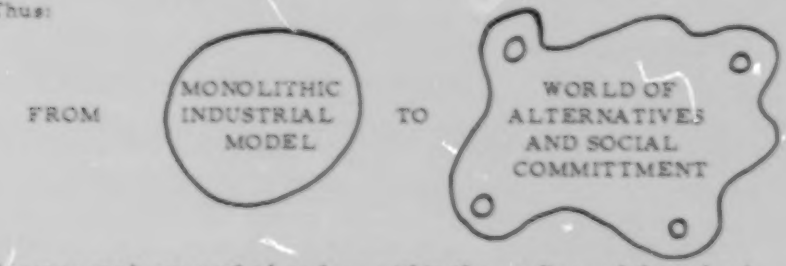
theorist frequently responds to this problem by stating that specific preparation for examinations does not affect the results very much, so parents and teachers should not worry about the effects of change. But no parent is likely to listen for long, and for small wonder: if one believed that education did not affect performance on the examinations, it would be only a short step to accepting the proposition that education does not matter very much in any way!

Humanization of Curricular Technology

The task of the humanist in curriculum is to free himself from the confines of the bureaucratic school and the sorting functions it performs for the status system and develop instead, the capacity to design and actualize a pluralistic education - the educational aspects of a pluralistic society.

The task is to move from educational routes which are largely characterized by bureaucratic procedures which sort students into the channels of the technical-industrial system into an educational panorama of many avenues toward many kinds of personal and social development and which, through its pluralism, leads the other aspects of the society toward a world of alternatives and committment to social improvement.

Thus:

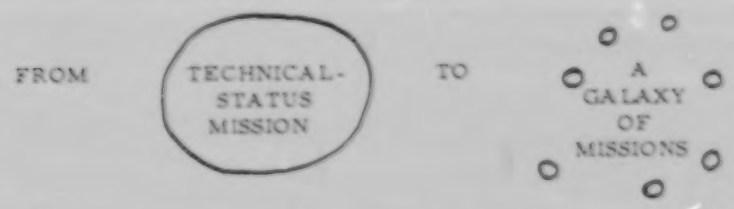


Because we have worked so long within the confines of the school as an institution and the teacher role as usually defined, this task will not be easy, for most existing curriculum theory and subtheories are straight-jacketed by the existing structure of the school and that ubiquitous teacher role. What we need to erect are sets of engineering propositions which can be used to bring about a wide variety of educational environments, including the institutional forms which can nurture them.

The Spectrum of Educational Missions[25]

The pluralistic world of education will be composed of many kinds of educational programs designed to further a large number of educational missions. The missions of the present school are tied to ascendency and survival in the technical-economic system. In place of this, a vast variety of missions must emerge.

Monolithic to Humanistic Education: the Problem of Missions



The mission of an educational program can be defined in terms of the domains through which it (the program) enters into the life of the student. Since education is an attempt to enter one's life and change it or assist one in changing himself, the product of education can be described as a developed capacity to respond to reality in new ways. The primary task in selecting an educational mission is to identify the domains through which the program will enter the life of the learner in order to change his responses to living in the world. The pluralistic education should represent many domains of possible development.

The possible domains of missions can be divided into three, with the caution that the categories overlap somewhat: (1) we can attempt to improve the capacity of the learner through direct intervention in the personal domain, (as through a direct attempt to improve his intelligence or to give him greater control over directing his own destiny); (2) we can attempt to enter the social domain, to assist him at a point where he is in interaction with his fellowman, (as when we attempt to teach him social or economic skills); or (3) we can attempt to reach him through an academic domain, by teaching him academic skills and ways of dealing intellectually with complexity, (as when we attempt to teach him the social sciences). We can use these three categories, the personal, the social, and the academic, to sort out some of the possible direction of education. Then, for each type of mission we can learn what kinds of environments are likely to promote development in that domain. To assist us, we can turn to those educators who have specialized in creating environments appropriate to specific domains. For example, Rogers,[26] Maslow,[27] and

others have developed approaches for achieving missions in the personal domain. The National Training Laboratory[28] among others, has developed principles to apply to the interpersonal domain. Psychologists like Ausubel,[29] Piaget,[30] and others have developed theoretical structures from which engineering propositions in the academic domain can be developed and developers like Schwab,[31] and Taba[32], and Suchman,[33] have developed engineering propositions with which academic missions can be approached.

The result of this work is an array of potential curriculum theories which can be applied to the creation of alternative educational environments. Figure one displays the theoretical results of such an enterprise:

Missions \ Means	1	2	3	4	etc.
1					
2					
3					
4					
etc.					

Figure 1. Missions-means Matrix

Just as missions can be categorized into the personal, the social, and the academic, so it is with approaches to the creation of educational environments. Approaches vary according to the view of reality which is emphasized. Some, the personalists, view reality as an individual thing, and concentrate on environments which help the individual create his reality and his world-view. Others, the interaction-oriented, emphasize the social negotiation of reality and focus on environments which facilitate social processes. A third category includes the information-oriented, who emphasize the symbolization of knowledge and concentrate on environments which will improve our symbolic capacity to process information. A fourth family focuses on the ways which culture shapes behavior and concentrates on the manipulation of the social environment to shape external behavior.

Hence, four types of approaches to the creation of educational environments can be related to three categories of educational mission.

Types of Environments

Types of Missions	Personalistic	Interactive	Informational	Behavior-Shaping
Personal				
Social				
Academic				

The family of "personalists" includes those theoreticians and practitioners who focus primarily on the individual's construction of his own reality. Thus they focus on the development of the individual, and speculate on the environments which might affect his personality or his general ways of relating to the world. Therapists, especially, tend to share a concern with the distinctive ways each person constructs his world; they see human nature in terms of individual person.

The second family, those educational theorists and practitioners who focus on the processes by which groups and societies negotiate rules and construct social reality, sees education as a process of improving the society. Many of them have suggested an ideal model for society and procedures for creating an education which can help to bring that model into a wider audience.

Others who emphasize social behavior concentrate on interpersonal relations and the dynamics of improving them. The approaches to education in either case have a distinctly social character.

The information-processing category consists of educational theoreticians and practitioners who are concerned with affecting the information processing system of the student. So it includes those who have developed educational procedures designed to increase general thinking capacity (as the capacity to think abstractly or to think inductively). It also includes those who have focus on ways of teaching students to process information about specific aspects of life. For example many educational theorists believe that a major mission of education is to develop approaches to the teaching of the academic disciplines, so that the student learns to process information in the ways that the academic scholar processes it and thereby achieves the intellectual power of scholarship.

The fourth group focuses on the processes by which human behavior is externally shaped and reinforced. The major theorist in this area is B. F. Skinner,[34] and their major efforts have been devoted to understanding the shaping of human behavior and how education can be built on an understanding of processes.

It is to these four families that curriculum workers can turn for ideas about educational missions and means. On the following table there appears a list of some educational theorists and approaches from each of the four categories, grouped according to the domain of mission that each one favors.

TABLE I

A LIST OF EDUCATIONAL APPROACHES, GROUPED BY ORIENTATION AND DOMAIN OF MISSION

Approach	Major Theorist	Orientation (Person, Social Interaction, Information-Processing, or Behavior-Modification)	Missions for which Applicable
1) Non-Directive	Carl Rogers[35]	Person	Development into "fully-functioning" individual (However, broad applicability is suggested, for personal development includes all aspects of growth.)
2) Awareness Training	Shutz,[36] Perls[37]	Person	Increasing personal capacity. Much emphasis on interpersonal development.
3) Group Investigation	Dewey,[38] Thelen[39]	Social-Interests	Social relations are permanent, but personal development and academic rigor are included.

TABLE 1 (CONT.)

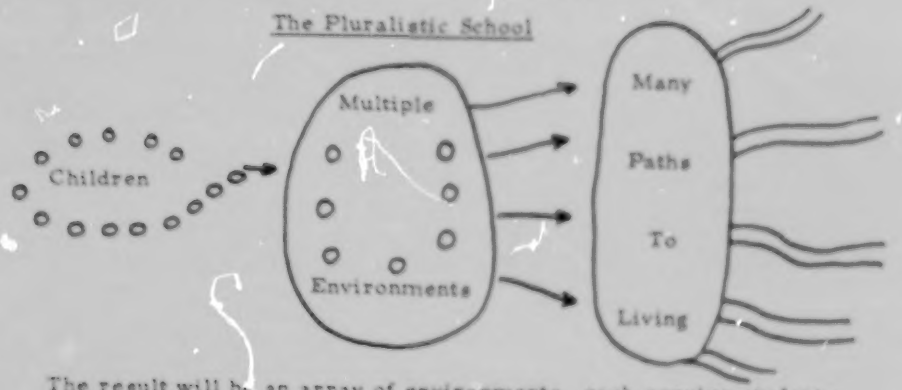
4) Reflective Thinking and Social Inquiry	Hullfish and Smith,[40] Massialas and Cox[41]	Social Interaction	Improvement of democratic process is central, with more effective thinking the primary route.
5) Inductive Reasoning	Taba,[42] Suchmann,[43] and others	Information-Processing	Primarily designed to teach academic reasoning, but used for social and personal goals as well.
6) Logical Reasoning	Extrapolations from Piaget (See Sigel, Sullivan)[44]	Information-Processing	Programs are designed to increase thinking, but also are applied to moral development and other areas. (See Koblberg.)
7) Psychoanalytic	See L. Tyler[45] and others	Person	Personal emotional development is primary and would take precedence.
8) Creative Reasoning	Torrance,[46] Gordon	Person	Personal development of creativity in problem-solving is priority but creative problem-solving in social and academic domains is also emphasized.
9) Academic Modes	Much of the Curriculum Reform Movement[47] (See especially Schwab[48] and Bruner[49] for rationale.)	Information-Processing	Designed to teach the research system of the disciplines, but also expected to have effect in other domains (e.g., sociological methods may be taught in order to increase social understanding and problem-solving.

TABLE 1 (CONT.)

10) Programmed Instruction	Skinner[50]	Behavior Modification & Theory	General applicability: a domain-free approach.
11) Conceptual Systems Matching Model	D. E. Hunt[51]	Person	An approach designed to increase personal complexity and flexibility.

The purpose of the curriculum field is to develop general knowledge about how to bring educational missions and means together in the real world. It is the creation of pluralistic educational environments that is our business. We need the ability to specify alternative missions, to create the environments that will accomplish those missions, and to carry out the engineering necessary to create the material, the social systems, and the instructional systems that will actuate them.

The Pluralistic School



The result will be an array of environments, each serving students in a particular kind of way.

In practice, students will create their own school by selecting from a wide offering of planned educational programs. To see how this might work, let us look at several modes of education - curricular modes, we shall call them, and see how they might be brought together in a student's life. (They represent only a few of the possibilities.)

Three Curriculum Modes

One kind of curriculum mode that we will learn to engineer can be called the individualized self-teaching school or the cybernetic system mode. It is characterized by being made up of preplanned materials, largely automated utilizing self-instruction by individuals or groups for whom instructional activities have been prescribed, again by an automatic assessment system that also feeds back progress reports to the learner. The cybernetic mode will present to the student a large array of self-administering course or programs in many areas. He will put together much of his education by selecting from this bank of alternatives.

A second curricular mode centers around individual counseling to help the learner structure his own educational goals and activities. The learner might be led to encounter some kinds of preselected problem situations, but learning is seen as personal and continuity as psychological. We can call this the tutorial mode.

A third curricular mode involves group inquiry. Groups analyze problems, try on ideas from the disciplines, and explore social values. The scholarly endeavor of the group and its interpersonal processes are included as subjects for study. The disciplines are learned by practicing them. Democratic process is valued. Feedback is collective and emergent. Content may be partly preselected and partly produced by active inquiry and dialogue on the nature of society.

Each of these curricular modes can be adapted to perform unique and important functions in education. Blended, they can offer a common general education, the development of personal talent, and the humanizing effects of cooperative inquiry into critical issues. Let us examine them individually and then see how they can be used together.

The Cybernetic Systems Mode

We are more certain of some educational objectives than others. The cybernetic mode is appropriate in areas of curriculum where: (1) We have relatively stable agreement about cognitive or skill objectives. That is, we are relatively sure that we want to accomplish the objectives and will want to accomplish them for some time to come. A good example is skill in the four fundamental operations integers and rational numbers. For the next few years (not forever!) it seems safe to say that we want all possible children to develop reasonable proficiency in this area. Reading skills are another area in which we are sure that in the foreseeable future all possible learners should be brought to a high level of

competence. It is not necessary for elementary school facilities or individual teachers to decide annually that the arithmetic operations or reading skills will be taught. We can stabilize these and certain other areas for a long period, so far as general objectives are concerned. (2) We can construct adequate self-instructional devices for the vast majority of students. "Self-instructional" should be broadly defined here. One can learn many things by reading about them. Books are self-instructional devices. Programmed instruction should be included. Units using films, tapes, and other media have been developed. Computerized games can teach many things. Simulation techniques will expand self-instructional possibilities greatly. (3) We can develop automated feedback systems for keeping the learners and responsible adults informed of progress. Programmed instruction has an edge here, because of the precision with which objectives are specified and ordered, and the easy amenability of the process to "embedded" tests. However, precise automated evaluation is possible nearly any time that objectives are clear and self-instruction is possible. (4) The area can be learned as well alone as in a group. Many aspects of social dancing might be acquired in response to films and computer-controlled instructions, but much of the appeal would be gone. On a more serious side, controversial issues, drama, and improving social and socio-intellectual skills require group activity for a good bit (rarely all) of the instruction. Learning map skills, on the other hand, does not require group interaction or very much didactic presentation by a teacher. (5) Pacing of instruction is important. For example, in any curricular mode, many arithmetic and reading skills are achieved at enormously different rates. In fact, teachers working alone, and with traditional materials and normal pupil-teacher ratios, have been unable to achieve adequate individualization of instruction in most skill areas.

With respect to the social atmosphere in this mode, the norms would stress independence and industriousness. Students would need to learn to judge their own progress and "reward themselves" for progress. An air of calm support and mutual help would be important, as well as openness about progress. Teachers would function as facilitators and troubleshooters.

To summarize, where we have curricular objectives that are very stable, but are achieved effectively by self-instruction that can be monitored by automated feedback systems, we can apply cybernetic principles to create instructional programs. Such programs would not work for all students (no curricular mode does), and effective diagnosis would result in placing some children with tutors, remedial specialists, and teachers in groups, but they could work effectively for many. Subprofessional

technicians can be trained to work with the children and the feedback can be scrutinized constantly by a specialist who would sound the alarm for students for whom the program wasn't working.

Because of the negative reaction of so many educators to automation, we must stress again that the cybernetic curriculum need not be a deadly array of sequenced "programs." It can be a rich multimedia program, diversely using film games, books, programs, and other devices.* Also, it would not be appropriate for all parts of any curricular area. For example, while much science instruction might be automated, instruction requiring a cooperative attack on original problems could not be accomplished this way.

The cybernetic mode would be under constant revision as objectives change and technology improves. At any given time it would represent a bank of programs which students could dip into to construct part of their education. (High schools, for example, might offer an array of short courses in each curriculum area. By selecting a combination in a subject, a student could create his own layer program in required and elective areas.)

To create this bank of possibilities, systems planning procedures would be employed.

The Tutorial Mode: The Idiosyncratic Curriculum

The creation of tutorial modes challenges the curriculum worker in different ways. The old story about Mark Hopkins and the log has long been the symbol for a delightful and wise teacher, the idea of having one's personal teacher. We are always trying to find ways of giving students personal attention, whether by individualizing reading programs, providing guidance counselors, or offering the opportunity to learn the French horn. The ratio of pupils to teachers has been against us, however, and so has the idea that the "curriculum" must be "covered."

---

* The distinction between computer-assisted instruction and computer-monitored instruction is instructive in this regard. Computer-assisted instruction uses computer-controlled devices as the interface between the program and the student and is appropriate only within the cybernetic mode. Computer-monitored instruction orchestrates a wide range of devices, including books, films, etc. The combination - CAI plus CMI, enables the student to employ many learning devices within a program and can be employed in many curricular modes.

Well, the cybernetic curriculum mode puts books and machines to work, freeing manpower for the development of curriculums devoted not to the individualization of common learning but to the development of personal talents and interests. The idiosyncratic curriculum is appropriate for those ends which:

1. Are defined by the learner in his personal quest for understanding and self-development.

2. Need personal counseling to assure definition and availability of any special resources and advice which the learner needs.

3. While they might be achieved in group activity, are accomplished socially only through interest groups in the generic sense of the term. In other words, where personal interests are congruent enough, group inquiry serves idiosyncrasy.

An idiosyncratic curriculum might be achieved by assigning students to a kind of tutor whom we could name an academic counselor who meets with each student regularly and helps him define personal educational goals and the means for achieving them. In some cases he might serve as a more traditional tutor. In other cases he might help the student to locate a teacher, resource person, community resource, or whatever would help. If a student were studying justice, the counselor might help him find a court where he could watch cases. If the child were interested in the French horn, the counselor would help arrange a teacher.

The counselor would help the child develop a program of wide personal reading (we don't want him stopping with what we provide in the cybernetic curriculum). Also, the counselor would help him get together with others of similar interests (it's not much fun putting on plays or learning modern dance by yourself).

Our academic counselor could have overall charge of ensuring that the child's life in school is a good one and that he receives help with out-of-school problems. If he shows talent or creativity, the counselor would see that it receives nourishment. If things aren't going well for the child in the cybernetic or group inquiry portions of the educational program, the counselor would be able to help to intervene drastically if necessary.

We might envision some teachers whose sole function would be academic counselor, each with an assigned quota of students. Available

to them would be subject specialists of many kinds. Developing the functions of the academic counselor for the six and seven year old should provide some interesting research, since relatively few people have tried this sort of relationship with the younger child. It should be evident that such a mode would emphasize rewards for initiative and exploration. Seeking, probing, questioning would be highly valued. The technical support systems would need to be responsive to the demands of a great many students seeking a great many ends.

The curricular worker will have to face an enormous variety of tasks in order to depict and engineer tutorial modes. The possible tutorial roles, possible support systems, alternative ways of bringing students together with tutors and resources, provide a dizzying matrix of important engineering questions to be addressed.

The personal discovery curriculum belongs to the student. It can exist because of energy saved by the cybernetic curriculum. Both of these modes emphasize the learner as the individual. That is not all he is, however, so we need another curricular mode.

The Group Inquiry Curricular Mode

The inquiring group was at the core of the Progressive Movement's approach to education. The group of students, with their teachers, would learn democratic skills and scientific method simultaneously while they explored their world and developed commitment to the ideas of democracy. Until the academic curriculum projects began in the 1950's the chief thrust for social reform was provided by the legatees of the Progressives. An overwhelming proportion of curriculum supervisors in the schools of today was influenced by this tradition.

Its Achilles heel has always been its dependence on teachers with extraordinary skills. Given the supply of talent available to education, the demands made were simply too great for the average teacher. He could not know enough about things and handle groups well enough to cope with the range of educational objectives.

However, group inquiry as a mode is extremely useful when group skills and interdependence are to be acquired. The democratic way must be learned in situ. The learner should test himself against the ideas of others. Controversial issues and contemporary social movements, for example, need the interplay of diverse reactions to events. Many kinds of thinking can be learned if we have to balance our ideas against those of others. Group dynamics is an important learning agent. The power of the reference group, for example, can accomplish many things. The

intellectual and social climate of the school is a consequence of the group process. Students can teach each other a good deal about social life. Drama, debate, sciencing, are social and dependent on social feedback as well. Internation games require groups. Individual differences are advantageous. A homogeneous group, studying its society, would probably develop much less vigor and heat than a heterogeneous one.

As in the case of the other model, the curriculum worker has to face a large number of tasks in order to engineer the setting for academic inquiry. Teaching strategies have to be deweloped, studied, modified. The kinds of teachers who can employ them need to be identified. Academic inquiry in the various disciplines need to be compared and contrasted and ways of combining or separating them have to be clarified. Alternative technical support systems can be studied. The creation of each mode requires the use of systematic planning techniques and a range of instructional technologies.

A Spinning of Dreams

As if the task of creating and studying curriculum modes were not enough, the curriculum worker needs to develop plans for constructing well-balanced educational programs which can be orchestrated to serve (or by) a wide variety of students.

To illustrate this task, but hypothetically, let us construct a design for a school (remembering that "school" means "pattern of education" not a specific building) in which the basic organization of the school consists of four teams of teachers and clusters of support systems built around each of the three curricular modes. One team will use the cybernetic mode, one the tutorial mode, and two will employ group inquiry.

The Basic Education Layer

In the first case, let us build a self-instructional mode, using cybernetic principles and consisting of self-instructional units of many kinds which give the learner the option of developing himself in a number of areas. First of all, in terms of reading skills, then also in terms of arithmetic, then in terms of world history, let us build a chronological course within this mode. Let us also make available courses in several foreign languages, in art history, music history, and literature. The staff of this team will need to learn how to build alternative routes for students who are unable to teach themselves by this mode. They will need to be experts in diagnosis and in the training of aids that will do much of the work in these realms. The support systems clearly will

have to be massive self-instructional systems employing many media, television, tape, programmed instruction, conventional books, workbooks, language laboratories, activities packets that instruct people on projects to be carried out, and many other things.

The Personal Layer

Second, let us build a tutorial mode of the kind that we described earlier. The team which will administer this mode will be skilled in training people to counsel with children and to facilitate their personal inquiry. Each youngster will need to contact his tutor several times a week and the tutors will need to call in consultants as the students develop interests in problem areas which are beyond their particular competencies. The support systems for this mode will need to include an enormous library, again utilizing many media, television, tape, contact films, motion picture films, filmstrips, slides, books of many sorts will need to be developed, and arrangements will need to be made so that the students can reach out beyond the walls of the school for instruction and for information.

The Sciencing Layer

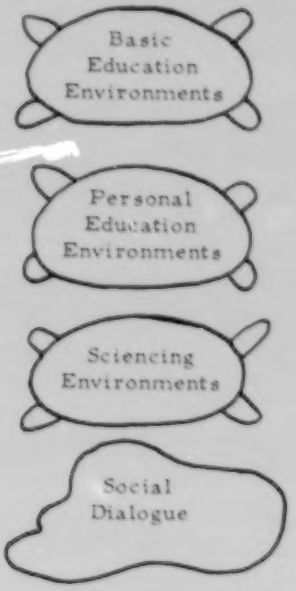
Let us also include a scientific inquiry system. In this mode, skilled group leaders will lead groups of children to inquire into significant problems and in the course of that inquiry will teach them the modes of inquiry and the structures of the academic disciplines. Each child should be engaged in several groups during each year. The support systems for this layer need to include the products of the academic reform movement, the systems for teaching the discipline, to the children. Since many of these teachers will be expert in their discipline, more important probably are laboratory facilities, excellent libraries, and aides who can construct materials when they are needed and help the youngsters get the data and to ideas when they have the need. In this mode, each group will identify problems and attack them at its relative leisure. Scientific inquiry should not be hurried, and it is in the dialogue and in the debate that the structures of the disciplines become clear and the modes of inquiry become explicated.

The Dialogue Layer

The fourth layer of this school will be devoted to a dialogue on the nature of the society and on the future courses that it should take. In this mode again, skilled group leaders will help groups of children identify and study serious social problems. Also television programs will bring to the youngsters on a weekly basis information and analysis about contemporary events. At the present writing, activities in such a mode would deal with the problems of the cities, the problems of poverty, the problems of

building an international community, and the like. The teachers need to be skilled in group inquiry and to be backed up by support systems and materials which include not only magnificent library facilities of the kind described for the layer preceding this, but also by people who can help construct materials when these are needed. Some aspects of this layer can be accomplished through the mass media, as indicated before. Television programs can bring to the students of an entire city information and opinion about certain events, and this should be done regularly. Other activities should be done at the group level where clusters of youngsters attack and try to solve problems that seem worthwhile to them.

The Four Layer School



The Balance in a Multi-Layer Education

In such a school, teachers would work in teams. As a result, the student is not exposed simply to the personality and opinions of one person at a time but is a constant participant in a dialogue about what to do next and how to do it. If one teacher cannot help him learn the skill he needs, then he can turn to others. If one teacher has strong opinions about some

segment of academic inquiry, or about society, then that person's opinions can be balanced by those of the other members of the team. Furthermore, such a school balances the possibilities in the life of the learner. He is not dominated by skills, nor by the dialogue on society. He has the opportunity to participate in all of these. Also because each teacher does not have to be responsible for all kinds of learnings, it is possible for the teachers to become experts and to teach each other the skills which are needed to operate in their particular mode.

In today's schools too many teachers perform too many functions and students are clustered together in such a way that enormous effort has to be expended to treat them as individuals. In the multilayered school, some activities would be organized for individualization, and others for group inquiry and there would not need to be a conflict between the two. Furthermore, the mass media, instead of being argued about as an alternative to the classroom teacher, can be utilized to perform its natural function.

The political organization of such a school should provide places for students to share in steering committees that operate the support systems, create materials, and shape the ways that students select curriculum alternatives. For example, the library should be operated by a faculty, student, and teacher aide committee that keeps in continuous touch with the needs of the students, the needs of the faculty, and the demands that are made on the staff. All the other support systems, too, should have steering committees of this kind so that the governance of the daily life of the school is a cooperation among all the members of the community.

Furthermore, the "school" should link students throughout the nation and even the world to engage in the social dialogue necessary to bring about pluralism in all aspects of life. Film, television, and print media now enable us to study with others far removed from us in space - an essential if we are to face social problems beyond the scope of our village or urban neighborhood.

As an example, let us look at a brief description of a curriculum plan designed to capitalize on television's capacity to link students all over the country together in a study of a serious problem that faces them all - the problem of alienation.

A Comprehensive Curriculum Approach to the Problem of Alienation

This curriculum is part of the fourth layer of the school: social dialogue.

The Mission: A War Against Alienation

Our mission is to bring together the young people of America in a war against alienation that divides men in a mass society.

Since the term alienation has been rather loosely used in the popular press, although generally it refers to the sense of aloneness and disaffiliation among men in a mass technological society, we should take some pains with its definitions, but to avoid a long digression from the substance of this paper, we will eschew a dissertation on its nature and assume that the audience for the paper is familiar with Durkheim, Weber, Keniston and the other analysts of the phenomenon.

Kenneth Keniston has become a spokesman for the factors which compound youth's dilemma against this general background of cultural alienation. He has pointed out that American society makes extraordinary demands on its members. In the first place they are asked to adapt to chronic social change. America is never still. Ideas come in and out of fashion at a dizzying rate. The insatiable media search continuously for new sensations and ideas and fads and transmit these as fast as they are discovered. Second, American society is extremely fragmented. At present particularly, it seems like a collection of minority groups. Caste and class combine with ethnic stratification. In the matrix which we have been describing above in which there is a great sense of social separation in general, society provides a condition in which individuals have to attempt to achieve a sense of personal wholeness in an extremely fragmented situation. In the third case there is an extraordinary discontinuity between childhood and adulthood in a situation of extreme competitiveness (which itself increases alienation) and great uncertainty. The adolescent is required to make decisions which will affect his entire life during a period in which he is very young and while faced with an almost impossibly complex economic and social matrix through which he must find his way.

The purpose of the comprehensive curriculum which we propose will be to reduce the sense of alienation and to decrease the fact of alienation by enabling young people to make life more personal and more filled with the dialogue in which they and their elders examine this aspect of society and attempt to do something about it.

General Behavioral Objectives for the Curriculum

It is not possible in a document of reasonable length to provide the detailed behavioral objectives which are necessary to develop a complete

curricular approach. However, it is necessary to provide enough behavioral objectives to give the reader a clear idea of the direction which we are recommending.

1. The student can apply Keniston's conceptual framework for analyzing alienation between contemporary society. The achievement of this objective would be demonstrated by the student's ability to use Keniston's concepts to describe behavior in the contemporary society, including exemplars from his own behavior and those of his associates, and the ability to point out or demonstrate exemplars of alienated and non-alienated behavior.

2. The student can apply conceptual systems for analyzing bureaucratic behavior in contemporary society.

3. The student can engage in a dialogue with peers and elders over the problem of alienation and affiliation in the society.

4. The student can formulate a plan for reducing alienation in a situation in which the student has involvement. This includes working together with others in the school situation to create a less alienated and more authentic and affiliated mode of behavior within that institution.

These are really very general objectives which are only designed to give the flavor of the specificity with which our mission should be approached.

The Teaching Strategy

Our strategy is designed to capitalize on the unique advantages of television to enable people all over the country to engage in a simultaneous study of matters of concern to all. It will use television to apply democratic process principles to the problem area. The strategy is engineered from the principles of the Group Investigation model articulated by Thelen. The strategy hinges on the possibility of using open circuit television plus television tapes to induce the students from all over the area to which the curriculum is directed, (we will speak of the nation for illustrative purposes) to engage in the simultaneous study of alienation. This nation-wide student body would develop ways of attacking and defeating alienation and replacing bureaucratic contact with authentic personal contact and meaningful interpersonal relationships. The key idea is the radical one of trying to induce a national cooperative inquiry into the problem area - to apply democratic process to what would result in cooperative groups all over the nation being

related to each other by means of television, working in the same area. Let's see how this might work - cooperative study on a nationwide scale.

Phase One

The strategy begins with televised confrontations with the problem situation. These confrontations can be in the form of dramatizations of puzzling incidents which are related to alienation. An example would be the Kitty Genovese incident in which apartment dwellers in New York heard and in some cases watched a young woman being stabbed to death in the courtyard of the apartment house and declined to get involved even to the extent of calling the police. But alienation comes in many forms less dramatic, and a good many of the confrontations should deal with the less dramatic but equally important incidents of human behavior which exemplify the alienated condition. Alienation is so widespread in the contemporary human scene that the task of generating the dramatization should be discouragingly easy. Driver behavior, for example, or commuter behavior in subways, behavior in large organizations, competitive situations, all abound.

Our suggestion is that the curriculum sequence begin with the presentation of a number of dramatizations in which various types of alienated behavior are illustrated. These should include routine behavior toward others, the failure to respond or get involved in social situations, withdrawal, criminal behavior of various kinds, interpersonal situations in which individuals do not respond to one another with warmth and authenticity, and others.

Phase Two

In the second stage, students should begin to make clear their reactions to the situations. For this purpose classes of youngsters in high schools and junior high schools throughout the country could react to the incidents and groups of them could be brought together to make television tapes or to have discussions which would be broadcast live in which they would share their various reactions. A dramatization should stimulate a wide variety of reactions and the variety itself should be puzzling to the student. Some students will not see the alienating effects of competition, or cliques, etc., whereas others will feel it keenly.

Ideally, classrooms all over the country would discuss their reactions to the confrontation dramatizations and then representatives from various regions of the country would appear on television to describe their reactions. This would set the stage for the next phase of the work, planning inquiry into the problem area.

Phase Three

At this point, using a nationwide hookup, social scientists could meet with the students in the studio and help them to formulate inquiry into their reactions to the situations that they had observed. Some of the scholars could introduce them to frameworks for analyzing various phenomena in the alienation complex. Television tapes could be prepared also and distributed to local classrooms to provide suggestions for lines of study into the phenomena.

This phase could be shaped so as to induce groups of local students in classrooms all over the country to study not only the confrontation dramatizations and the questions they raise, but also to expand their range of study into their community life and to begin to study the same phenomena in daily life that they are studying by means of their analysis of the confrontation dramatization.

As the study proceeded, classrooms could communicate problems and progress by television. Again the nationwide hookup could be used to provide consultation with social scientists over the study problems as they developed. For example if a group of students in New York, Los Angeles, and New Orleans were studying bureaucratic behavior in large organizations, the social scientist might appear on the television hookup and present to them ways to go about their study. Simultaneously television tapes could be made and distributed to the local schools providing further and perhaps more detailed advice.

As the studies proceeded, students could begin to share their findings with students in other parts of the United States. Other students could comment on the findings and the social scientists could have their commentary as well. The results of the students' study could be compared with the results of the scholarly study. Keniston, for example, could compare the findings of his analysis with those that are being turned up by students in various parts of the United States.

As soon as the studies were developed considerably and had been discussed and analyzed thoroughly, it would be time for the next phase.

Phase Four

In phase four the television medium would be used to challenge the students to two kinds of efforts. One would be to formulate plans to reduce alienation in some aspects of their lives. A second would be to formulate plans which could be applied on a nationwide scale to reduce alienation.

Over the nationwide network students and experts could present their plans as they were formulated, criticize the plans, and discuss their implementation. Groups in various parts of the United States which were formulating similar plans could be addressed over the nationwide network or through specially prepared television tapes to provide consultation from experts. (During all the phases up to this point, quite a number of programs would continue to introduce theoretical and student-generated ways of looking at the alienation problem so that in the course of the phases a rather complete coverage of the area would be ensured.) Considerable time would be taken with this phase so that alternative approaches to the reduction of alienation could be well aired and analyzed.

Phase Five

In this phase local groups would begin to put into effect their plans for alleviating some aspect of alienation within the orbit of their competence. As the plans were put into action, they would be reported over the nationwide network and particular local groups would prepare television tapes which would be sent to other local groups reporting their progress and problems. As the progress and problems were reported, experts would address the local groups over the nationwide network and also using the medium of videotape.

Simultaneously with the local activity, a nationwide organization of children would be started using the nationwide network and representatives of the local groups throughout the country would be put together to select some aspect of alienation for a nationwide frontal attack.

Phase Six

In this phase the local efforts would continue and the nationwide effort would be inaugurated. The nationwide network would be used to coordinate the efforts, to keep the students from various aspects of the country in contact with one another, and to develop and refine further plans. Using the nationwide network, aspects of the plan could be put into effect simultaneously all over the country. For example, let us suppose that one aspect of the plan was to increase warmth in hitherto impersonal relations such as the way that one relates to restaurants, waiters, and waitresses. Over the nationwide network, ways of doing this could be discussed and the students could set a target date for implementing the new form of behavior. Then, simultaneously all over the United States restaurant employees would find that young people were acting differently toward them. The students would know the plan was being implemented throughout the United States, they would have the reinforcement of the nationwide community, and the obligation of holding up their end of the game.

Phase Seven

Phase seven would consist of reports from local activities and the preparation for further national action. In addition, students would be taught how to engage in evaluation of their efforts, that is, how to determine whether or not they would be becoming less alienated in interpersonal relations and in inducing less alienation in other people.

Curriculum Mode

The combination of nationwide television with the cooperative inquiry strategy would result in an educational mode never before seen, that is, a cooperative inquiry which would have local and national aspects and which would involve all the young people of the country in the simultaneous study of problems that affect them very deeply. If this mode were successful, the students utilizing the nationwide network might select other areas for examination and study. Possibly problems of urbanization or of international understanding and relations, or of developing careers, or of learning to relate with others, or problems of sex and marriage, would be selected. The television mediated cooperative inquiry mode, enabling a dialogue among representatives of all the children of the nation and permitting them to interact with experts and their elders, might generate a national dialogue on problems of personal and social significance, in which the strength and optimism of the young could be combined with the technological knowhow of the old to produce what really could be a significant effect on the American society.

Curriculum engineering plans of this sort differ from the usual in that they begin with education (missions and means) and create the institutional form from the specification of the environment. If we confine ourselves to those environments which "fit" the format of the present school, then no pluralism will result - we simply will embellish the technical monolithism of the past. On the contrary, our efforts should be to increase on a continual basis the options which are available to the population and the flexibility with which they can be made available. As more options are developed, making more and more kinds of education commonplace, and giving students the power to educate themselves in increasingly humane ways, then the curriculum worker will be making his contribution to the search for an increasingly humanistic education. He will be helping people to clarify alternative educational missions or purposes and to select from among them; he will develop alternative curricular strategies for achieving those missions; and he will develop the means of institutionalizing a very wide range of missions and means in an increasing variety of institutional forms.

Hence, the curriculum worker will have an array of technologies which he can bring to bear on educational problems so that the society and students will have a layer range of options. Presently, schools present very limited alternatives to children and these alternatives are focused to help them to technical proficiency. The wider range envisioned here will enable students to create much of their own education and for a large proportion of the remainder to be devoted to a dialogue on the humanization of their society.

Notes

1. Leslie White, A Science of Culture: A Study of Man and Civilization (New York: Farrar, Straus, 1949) (Presents the extreme technocratic view, but in doing so clearly defines the dimensions of dependence each of us has with respect to his culture.)

2. For an authoritative definition of "curriculum," see: Ralph W. Tyler, Basic Principles of Curriculum and Instruction (Chicago: University of Chicago: University of Chicago Press, 1951).

3. (a) Robert J. Seidel and Felix F. Kopstein, A Systems Approach to Development and Maintenance of Optimal Learning Conditions (Washington, D.C.: Human Resources Research Office, George Washington University, 1967).

   (b) Robert E. Herriott and Benjamin J. Hodgkins, Socio-cultural Context and the American School: An Open-Systems Analysis of Educational Opportunity. OEG-2-6-062972-2095 (Washington, D.C.: U.S. Office of Education, Jan. 1969).

4. Ole Sand, Project on the Instructional Program of the Public Schools in National Education Association, Planning and Organizing for Teaching (Washington, D.C.: National Education Association, 1968).

5. The general view of A. S. Neill, Summerhill (New York: Hart Publishing Co., 1960).

6. Ole Sand, op. cit.

7. Analyses of the standardization of textbooks are fairly common. For an analysis in one curriculum area, see: Benjamin Cox and Byron Massialas, eds., Social Studies in the United States (New York: Harcourt, Brace & World, 1967).

8. C. W. Boardman and others, Democratic Supervision in Secondary Schools, rev. ed. (Boston: Houghton-Mifflin, 1961).

9. "6. A program of professional laboratory experiences should include some full-time student teaching to provide acquaintance with the range of the teacher's work and its interlocking relationships.

   While the benefits of short laboratory experience calling for observation and participation by the student are many, there are certain

kinds of experiences all prospective teachers should have which cannot be had without some opportunity to spend full time in a school situation. Unless a student has such a chance, he probably leaves his college preparation for teaching without ever knowing what it is like to be responsible for a group of pupils for all their activities over a period of time. Many beginning teachers meet very serious problems because they have not had an opportunity during their student teaching to learn what it is like to carry complete responsibility for a group of learners in all of their activities. This opportunity can be provided only when the student devotes his full time to student teaching." Florence B. Stratemeyer and Margaret Lindsey, Working With Student Teachers (New York: Teachers College Press, 1958), p. 50.

10. Jack Wiseman, "Cost-Benefit Analysis in Education," in Melvin R. Levin and Alan Shank, eds., Educational Investment in an Urban Society: Costs, Benefits and Public Policy (New York: Teachers College Press, 1970).

11. (a) Werner Z. Hirsch, "Education in the Program Budget," in Melvin R. Levin and Alan Shank, eds., Educational Investment in an Urban Society: Costs, Benefits and Public Policy (New York: Teachers College Press, 1970).

(b) Melvin R. Levin, "Yardsticks for Government," in Melvin R. Levin and Alan Shank, eds., Educational Investment in an Urban Society: Costs, Benefits and Public Policy (New York: Teachers College Press, 1970).

12. George B. Leonard, Education and Ecstasy (New York: Dell Publishing, 1968).

13. Herbert Kohl, Thirty-Six Children (New York: New American Library, 1967).

14. Robert Coles, Children of Crisis: A Study of Courage and Fear (Boston: Houghton-Mifflin, 1967).

15. Jonathan Kozol, Death at an Early Age (Boston: Houghton-Mifflin, 1967).

16. Ole Sand, op. cit.

17. The studies of teaching behavior illustrate the general point. As James Hoetker and William P. Ahlbrand, Jr. pointed out in their review of the studies of teaching, teachers who behave democratically

with children are quite rare. James Hoetker and William P. Ahlbrand, Jr., "The Persistence of the Recitation," American Educational Research Journal 6, no. 2 (March 1969), pp. 145-168.

18. "We have assumed, for example, that the most promising route of development for social studies is that identified in the literature cited earlier in this chapter--a route best described as the inquiry process. We accept Dewey's general definition...of this process as 'the active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends.' Furthermore, we have assumed that social studies content, practices, and purposes reflected in large measure in textbooks, the basic material source of most courses." C. Benjamin Cox and Byron Massialas, "The Inquiry Potential of the Social Studies," Social Studies in the United States: A Critical Appraisal (New York: Harcourt, Brace & World, 1967), p. 7.

19. The example of the reading field is representative. See: Allen H. Barton and David E. Welder, "Research and Practice in the Teaching of Reading: A Progress Report," in Matthew B. Miles, ed., in Innovations in Education (New York: Teachers College Press, 1964), for a penetrating analysis of the social psychology of the leadership within that curriculum area.

20. John Dewey, Democracy and Education (New York: MacMillan, 1916).

21. Ibid.

22. Edgar Z. Friedenberg, Coming of Age in America (New York: Vantage Books, 1963).

23. (a) Joel L. Burden and Kaliopee Lanzilotti, A Reader's Guide to the Comprehensive Models for Preparing Elementary Teachers (Washington, D.C.: ERIC Clearinghouse on Teacher Education, Dec. 1969).

(b) Bruce R. Joyce, "Variations on a Systems Theme," Interchange, 1970.

24. John I. Goodlad, School Curriculum Reform in the United States (New York: Fund for the Advancement of Education, 1964).

25. This description of educational missions has been amplified in Bruce R. Joyce, Alternative Models for Elementary Education (Waltham, Mass.: Blaisdell, 1969).

26. Carl Rogers, Client Centered Therapy (Boston: Houghton-Mifflin, 1951).

27. Abraham Maslow, Toward a Psychology of Being (Princeton: D. Von Nostrand, 1962).

28. Leland R. Bradford; Jack Gibb; and Kenneth Benne, eds., T-Group Therapy and Laboratory Method (New York: John Wiley, 1964).

29. David Ausubel, The Psychology of Meaningful Verbal Learning (New York: Grune & Stratton, 1963).

30. For curriculum strategies built on Piaget's work, see:

(a) Edmund Sullivan, "Piaget and the School Curriculum: A Critical Appraisal," in Bulletin #2 of the Ontario Institute for Studies in Education, 1967.
(b) Irving Siegel, "The Piagetian System and the World of Education," in David Elkind and John Flavell, eds., Studies in Cognitive Development (New York: Oxford University Press, 1969).
(c) Hanne Sonquist; Constance Kamii; and Louise Derman, "A Piaget-Derived Preschool Curriculum," in I. J. Athey and D. O. Rubadeau, eds., Educational Implications of Piaget's Theory: A Book of Readings (Waltham, Mass.: Blaisdell Publishing Co., in press).

31. Joseph Schwab, ed., The Biology Teachers Handbook (New York: John Wiley, 1965).

32. Hilda Taba, Teaching Strategies and Cognitive Functioning in Elementary School Children (San Francisco: San Francisco State College, 1969). Cooperative Research Project No. 2404.

33. J. Richard Suchman, The Elementary School Training Program in Scientific Inquiry (Urbana: University of Illinois, 1962). Report of U. S. Office of Education Project Title VIII, Project No. 216.

34. B. F. Skinner, Verbal Behavior (New York: Appleton-Century Crofts, 1957).

35. See Carl Rogers, op. cit.

36. See William Schutz, Joy: Expanding Human Awareness (New York: Grove Press, 1967).

37. Fritz Perls, Gestalt Therapy Verbatim (Lafayette, Calif.: Real People Press, 1969).

38. John Dewey, op. cit.

39. Herbert Thelen, Education and the Human Quest (New York: Harper, 1960).

40. H. Gordon Hullfish and Phillip Smith, Reflective Thinking: The Method of Education (New York: Dodd, Mead & Co., 1961).

41. C. Benjamin Cox and Byron Massialas, op. cit.

42. Hilda Taba, op. cit.

43. Richard Suchman, op. cit.

44. Edmund Sullivan, op. cit.; Irving Siegel, op. cit.

45. Louise Tyler, "A Case History: Formulation of Objectives from a Psychoanalytic Framework," AERA Monograph No. 3, in Instructional Objectives (Washington, D.C.: National Education Association, 1969).

46. E. Paul Torrance, Guiding Creative Behavior (Englewood Cliffs: Prentice-Hall, 1962).

47. John T. Goodlad, op. cit.

48. American Institute of Biological Sciences, Biology Teachers' Handbook, Joseph Schwab, ed. (New York: John Wiley, 1963).

49. Jerome S. Bruner, The Process of Education (Cambridge, Mass.: Harvard University Press, 1960).

50. B. F. Skinner, op. cit.

51. David E. Hunt, "A Conceptual Level Matching Model for Coordinating Learner Characteristics with Educational Approaches," Interaction, 1, no. 2, June 1970.

PHYSICAL EDUCATION OBJECTIVES OUT OF CURRICULAR CHAOS

Ann E. Jewett
University of Wisconsin
Madison, Wisconsin

"Sorting Out the Seventies" is the title of the September issue of Change magazine. My first reaction was that it was a most unimaginative and completely pedestrian title. But as I skimmed the table of contents and browsed through the articles, it seemed singularly appropriate for today's tasks and the pressing demands upon us as educators and creators and consumers of physical education curricula. Perhaps sorting, though somewhat prosaic, is indeed our priority task for achieving curricular improvement. Maybe sorting the bricks which have created chaos in our curricular brickyard is, after all, the soundest foundation for finding sanity in the seventies. To bring this task into clearer focus, I have chosen to adapt Bernard Forscher's 1963 commentary on scientific research.[1]

> Once upon a time, among the activities and occupations of man, there was a profession called physical education, and the performers of this activity were called physical educators. In reality, however, these men and women were builders who constructed edifices called school programs or curricula by assembling bricks called sport, dance, and gymnastic activities. When the bricks were sound and were assembled properly, the edifice was useful and durable and brought pleasure, and sometimes reward, to the builder. If the bricks were faulty or if they were assembled badly, the edifice would crumble, and this kind of disaster could be very dangerous to innocent users of the edifice as well as to the builder who sometimes was destroyed by the collapse. Because the quality of the bricks was so important to the success of the edifice, and because bricks were so scarce, in those days the builders made their own bricks. The making of bricks was a difficult and expensive undertaking and the wise builder avoided waste by making only bricks of the shape and size necessary for the enterprise at hand. The builder was guided in this manufacture by a blueprint, called a curriculum theory.
>
> It came to pass that a misunderstanding spread among the brickmakers. (There are some who say that this misunderstanding developed as a result of careless training of a new generation of brickmakers.) The brickmakers became obsessed with the making of bricks. When reminded that the ultimate goal was edifices, not

bricks, they replied that, if enough bricks were available, the builders would be able to select what was necessary and still continue to construct edifices. The flaws in this argument were not readily apparent, and so it happened that the land became flooded with bricks. It became necessary to organize more and more storage places, called textbooks, journals, ruleguides, and equipment rooms, and more and more elaborate systems of bookkeeping to record the inventory. In all of this the brickmakers retained their pride and skill and the bricks were of the very best quality. But production was ahead of demand and bricks no longer were made to order. The size and shape was now dictated by changing trends in fashion. In order to compete successfully with other brickmakers, production emphasized those types of brick that were easy to make and only rarely did an adventuresome brickmaker attempt a difficult or unusual design. The influence of tradition in production methods and in types of product became a dominating factor. Unfortunately, the builders were almost destroyed. It became difficult to find the proper bricks for a task because one had to hunt among so many. It became difficult to complete a useful edifice because, as soon as the foundations were discernible, they were buried under an avalanche of random bricks. And saddest of all, sometimes no effort was made even to maintain the distinction between a pile of bricks and a true edifice.

On a clear day, if you stop to look around you, you will see that Physical Education in the '70's must find the means to dispel the chaos in our brickyard, or the newest, finest, most substantial edifices, whose doors are opening wider every year, will be built without any physical education bricks at all.

And so some of us have become students of curriculum theory and seekers of a satisfactory conceptual framework for making curricular decisions. I suggest that purposes of human movement provide a sound foundation for selecting and assembling the bricks. Clearly, a new strategy for physical education is required. One model is not appropriate for several generations of students nor for all those who would learn in any given generation. We need dramatically different kinds of models for physical education. Judson Jerome states, "the major intellectual shift of our time . . . is from mechanical models to organic models for understanding the universe."[2] Might our contribution be more meaningful if we shift from the analytic models of the physical sciences to humanistic models for physical education?

Philip Jackson charges:

> . . . many simplistic views of the education process, commonly derived in a haphazard manner from the engineering sciences and often dressed up in the brassy lingo of the military strategist, are inadequate. They are not only inadequate as conceptual models but they are downright pernicious in the way they are used to discourage educational researchers and other competent people from tackling problems that cannot be easily phrased in terms of 'inputs' and 'outputs' and made quantifiable by the introduction of a couple of paper and pencil tests. The field of education . . . does not need better tests and more sophisticated research designs nearly as badly as it needs new ways of looking at some of its oldest problems . . .[3]

As professional educators should we not be concerned with what the process of schooling does to students and how it achieves its effects? Should we not seek educational models which focus on our students as human beings? As physical educators are we competent to implement conceptual models for humanistic physical education curricula which place emphasis on human purposes and movement processes? If self-examination suggests that we are not competent in this type of curricular planning, are we willing to learn with and from our students in order to become competent?

The purposes of physical education have been stated at many levels of sophistication. Simply put, those responsible for school programs in human movement have been concerned with health, play, and movement skill. Physical educators with differing convictions and in changing circumstances have viewed these concerns in varying relationships to each other, in individual and social contexts, and with greater or lesser attention to scientific knowledge, particular neuromuscular coordinations, or specific attitudinal changes. But physical education curricula have consistently sought to develop some degree of physical fitness, recreational competence, and skillful movement. And physical education curriculum experiences in the '70's will continue to be selected in terms of human movement goals. It is my conviction that the key purposes of movement delineate the important curricular content of physical education. Man moves: (1) to fulfill personal developmental potential, (2) to develop movement skills utilized in adapting to and controlling the physical environment, and (3) to assist the individual in relating to other persons. Each of these key purposes has subpurposes. Further, each subpurpose embraces several essential elements. One such conceptual analysis appears in Table 1.

TABLE I

KEY PURPOSE CONCEPTS[4]

MAN MASTER OF HIMSELF: Man moves to fulfill his human developmental potential.

Physiological Efficiency: Man moves to improve or maintain his functional capabilities.

Circulorespiratory Efficiency. Man moves to develop and maintain his circulatory and respiratory functions.

Mechanical Efficiency. Man moves to increase and maintain his range and effectiveness of motion.

Neuromuscular Efficiency. Man moves to maintain or improve his muscular function.

Psychic Equilibrium: Man moves to achieve personal integration.

Joy of Movement. Man moves to derive pleasure intrinsic to human motion.

Self-Knowledge. Man moves to gain self-understanding and appreciation.

Catharsis. Man moves to release tensions and frustrations precipitated by the pressures of modern living.

Challenge. Man moves to test his prowess and courage through physical activity.

MAN IN SPACE: Man moves to adapt to and control his physical environment.

Spatial Orientation: Man moves to relate himself in three dimensional space.

Awareness. Man moves to construct a conception of his body and how it moves in space.

Relocation. Man moves to propel or project himself from one place to another in a variety of settings.

Relationships. Man moves to regulate his body position in relation to stationary and moving objects and persons in the environment.

Object Manipulation: Man moves to give impetus to and to absorb the force of objects.

Maneuvering Weight. Man moves to support, resist or transport mass.

Object Projection. Man moves to impart momentum and direction to a variety of objects.

Object Reception. Man moves to intercept a variety of objects by reducing or arresting their momentum.

MAN IN A SOCIAL WORLD: Man moves to relate to others.

Communication: Man moves to share ideas and feelings with others.

Expression. Man moves to convey his ideas and feelings.

Clarification. Man moves to enhance the meaning of other communications forms.

Masking. Man moves to obscure his intent or emotion.

Group Interaction: Man moves to function in harmony with others.

Teamwork. Man moves to share in common movement goals.

Competition. Man moves to vie for individual or group goals.

Leadership. Man moves to motivate and influence group members to achieve common goals.

Cultural Involvement: Man moves to take part in movement activities which constitute an important part of his society.

Participation. Man moves to develop his capabilities for taking part in movement activities popular in his society.

Movement Appreciation. Man moves to understand and become an appreciative observer of sports and expressive movement forms.

Cultural Preservation. Man moves to understand and extend his cultural heritage.

The purpose concepts serve as the foundation for describing the functions of movement in achieving the goals of man and thus for defining the scope of the physical education curriculum. Well selected bricks can provide the materials for an attractive structure; but if the builder is to construct a sound edifice, the manner in which the bricks are put into place is also important. The purpose concepts are only one dimension of the curriculum theory or blueprint which guides the builder. The processes by which one learns to move must also be an integral part of curricular planning. Movement processes constitute the other dimension of the conceptual framework which is crucial in promoting an action-oriented system focusing on the individual learning to move. Process learnings are essential curricular content in terms of a hierarchy of desired movement process outcomes. A movement classification scheme for the selection and statement of educational objectives in the motor domain serves as a blueprint for ordering the bricks for the development and enjoyment of each person who will use the edifice.

Educators in other subject fields have developed taxonomies of educational objectives, not only to clarify and communicate desired outcomes, but also with the hope of revealing order among these outcomes.[6] Classification of educational objectives suggests ways of planning for more complex types of learning. It forces questions as to whether most of our classes offer repetitious experiences, encourages planning for higher levels of learning, and individualizes movement challenges within any group of learners.

Physical education instruction is concerned with cognitive and affective learning as well as motor learning. Indeed it is readily recognized that each person responds as a whole thinking-feeling-acting being. Attempts to abstract and classify behaviors into three domains represent emphases and biases accepted so that we may organize curricular content and guide instructional processes more efficiently. In physical education, it seems most desirable to plan learning activities in terms of our bias toward movement and our emphasis on desired educational outcomes in the motor domain. It is assumed that we will continue to be concerned with cognitive and affective objectives; but those portions of the curriculum for which we are responsible should be sequenced primarily in terms of motor development and motor learning.

The cognitive and affective taxonomies developed by Bloom and his associates are well known.[7] Taxonomies for the third domain, in which we are vitally involved, are less well developed and less satisfactory, in my opinion, for conceptualizing the curriculum. In the absence of a more adequate tool, some curriculum students are experimenting with this tentative taxonomy for educational objectives in the motor domain. (See Table 2.) The proposed taxonomy assumes that movement processes

TABLE 2

TAXONOMY OF EDUCATIONAL OBJECTIVES:
MOTOR DOMAIN[5]

Learning Behavior	Definition
1.0 Generic Movement	Movement operations or processes, which facilitate the development of human movement patterns
1.1 Perceiving	Recognition of movement positions, postures, patterns and skills by means of the sense organs
1.2 Imitating	Duplication of a movement pattern or skill as a result of perceiving
1.3 Patterning	Arrangement and use of body parts in successive and harmonious ways to achieve a movement pattern or skill
2.0 Ordinative Movement	Meeting the requirements of specific movement tasks through processes of organizing, performing and refining movement patterns and skills
2.1 Adapting	Modification of a patterned movement or skill to meet specific task demands
2.2 Refining	Acquisition of smooth, efficient control in performing a movement pattern or skill as a result of an improvement process, e.g. a. elimination of extraneous movements b. mastery of spatial and temporal relations c. habitual performance under more complex conditions
3.0 Creative Movement	Processes of inventing or creating skillful movements which will serve the unique purposes of the learner

3.1 Varying	Invention or construction of unique or novel options in performing a movement pattern or skill
3.2 Improvising	Extemporaneous origination or initiation of novel movements or combinations of movements
3.3 Composing	Creation of unique movement designs or patterns

represent one large category of human behavior and that process learnings are, therefore, essential curricular outcomes. Sequence can be provided in the physical education curriculum by categorizing movement processes as: (1) generic movement, or movement operations which facilitate the development of human movement patterns; (2) ordinative movement, defined as meeting the requirements of specific movement tasks through processes or organizing, performing, and refining movement patterns and skills; and (3) creative movement, or processes of inventing or creating skillful movements which will serve the unique purposes of the learner. These process concepts constitute the second major dimension of the conceptual framework.

Learning of movement processes can be combined with the learning of key purpose concepts, if the teacher uses these categories as the bases for writing instructional objectives in the motor domain. The lowest level of the taxonomy is the category of perceiving, which is defined as recognition of movement positions, postures, patterns and skills by means of the sense organs. The highest level of the taxonomy, describing the most complex behavior in the motor domain, is called composing and is defined as the creation of unique movement designs or patterns. (See Table 3 for examples of objectives stated at each level.)

The proposed taxonomy, in its present form, categorizes eight levels of movement process behavior. It can be used to generate objectives for individual learners and for instructional groups in any educational setting. Consider a student who is learning tennis, for example. As a novice, most of his objectives would fall into generic movement categories. In application of tennis fundamentals to the game situation, which is considerably more complicated in a movement sense, he will be striving to achieve ordinative movement objectives. As he becomes a competent tennis player, some of his learning goals are more appropriately described at the creative movement level. (See Figure 1.)

Learning of movement processes is combined with the learning of key purpose concepts as teachers develop instructional objectives using elements of human movement as the content focus and movement processes to identify the level toward which instruction is directed. This procedure can be used to generate educational objectives for individual learners and for instructional groups in any learning environment, utilizing a wide variety of learning media, including but not limited to, traditional and popular games, stunts, sports and dance activities.

It is generally agreed that teachers need to be guided by some conceptual framework in making key curricular decisions. If curricula are developed in terms of a purpose-process framework, clarification of

TABLE 3

EXAMPLES OF OBJECTIVES
STATED ACCORDING TO THE MOTOR TAXONOMY

1.0 Generic

1.1 Perceiving
Discriminate between a backward roll and an egg-roll.
Recognize joint actions involved in prancing.
Identify 3 possible positions for finishing a forward roll.

1.2 Imitating
Mirror a partner's movement.
Duplicate the underhand serve motion as demonstrated.

1.3 Patterning
Coordinate the arm swing and delivery with the 4 step approach.
Perform a flank vault.
Execute a backhand drive.

2.0 Ordinative

2.1 Adapting
Polka to a new musical arrangement.
Adjust the pace in running 1 1/2 miles in order to complete the distance in 14 minutes.
Employ sculling while the legs assume a tuck position.

2.2 Refining
Regulate the serve so that it lands in Area X 50% of the time.
Perform the putting motion smoothly and consistently.
Synchronize 3 forward rolls with a partner.
Field 7 out of 10 ground balls, throwing accurately to 1st base.

3.0 Creative

3.1 Varying
Alter a movement sequence to meet personal abilities.
Change the front dive so that a different aerial posture occurs before entry.
Revise a team strategy to meet the immediate situation.

3.2 Improvising

Combine 3 movement tricks on a floor scooter.

Anticipate an opponent's movement in order to intercept a pass.

3.3 Composing

Design a team strategy for an offensive play.

Compose a 3 minute exercise routine.

Design a game using catching and throwing.

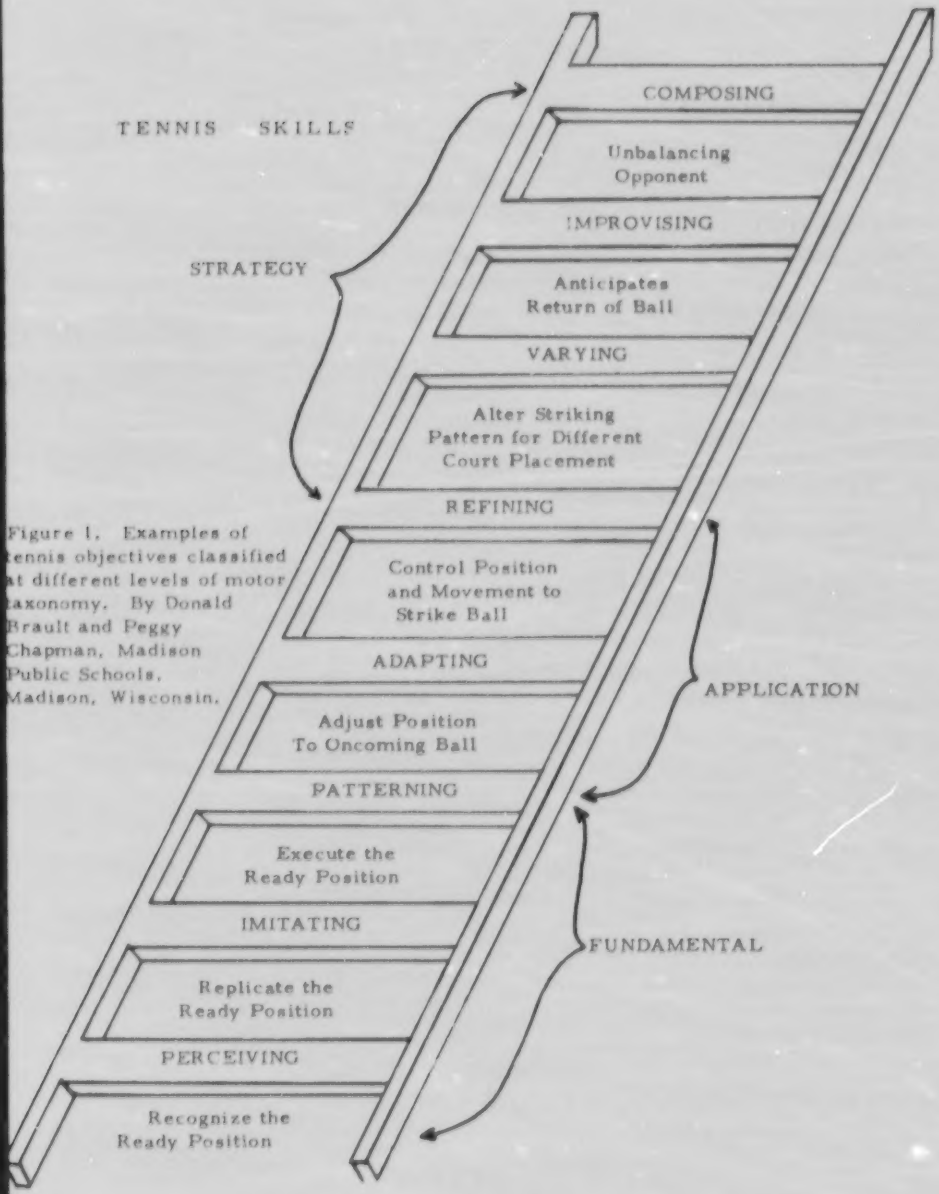


Figure 1. Examples of tennis objectives classified at different levels of motor taxonomy. By Donald Brault and Peggy Chapman, Madison Public Schools, Madison, Wisconsin.

purpose concepts will help to define the scope of the subject content and classification of movement processes will guide the ordering of learning sequences. How does this help in building an edifice? For illustration, let us review curricular developments in Update High School.

Update is a rapidly growing community of approximately 50,000. A recently established industrial plant with substantial federal contracts and a newly-designated state university, originally planned as a two-year community college, contribute to a varied population and an expanding economy. The school district operates 10 elementary schools, three middle schools accommodating grades six through nine, and a comprehensive three-year high school.

The activity content of the elementary physical education curriculum includes learning modules or short capsules of movement experiences planned to develop fundamental concepts and progressively increasing abilities related to all major concepts. Much of the child's movement curriculum is organized to focus on "man in space." Much emphasis is given to general body awareness, basic locomotor patterns, and body management skills. Ball and object handling activities also receive major attention. Elementary learning in using movement to relate to others is achieved through creative rhythms, folk dance, and games. Every child has at least occasional opportunities in physical education to express his personal ideas and feelings through self-directed movement. Games are selected and designed to provide practice in particular movement skills and to stimulate the development of elementary concepts of rule-functioning in group activities, cooperation, competition, and leadership. Physical education experiences throughout the elementary school are designed to assist the individual child in self-mastery, through development of an acceptable body image and a positive concept of himself in movement settings; ample opportunities for knowing personal joy in movement; and progressive development of balance, strength, agility, and circulorespiratory endurance.

The Update curriculum in middle school physical education has two major elements: (1) expanding understanding of movement through refining personal skills, and (2) greater depth of social understanding through experiences in movement activities of the student's own and other societies. Concepts of self-mastery are strengthened through achievement of higher levels of skill in familiar activities and successfully meeting the challenge of learning new skills. Venturesome activities requiring more personal courage are included. Dynamic posture is studied directly, but most boys and girls receive no formal instruction directed primarily toward strength, flexibility, and cardiorespiratory endurance unless individually prescribed exercise programs are indicated.

Students work toward a growing understanding of movement principles in situations emphasizing modifications of environmental media. Aquatic experiences comprise from 20 to 35 % of individual programs. All students learn principles of buoyancy and adaptations of biomechanics, balance, and breathing appropriate techniques, elementary forms of rescue, standard stroke patterns, diving, water stunts, and alternate elective modules for those students qualified for more advanced aquatic activities.

Tumbling, gymnastics, and trampolining are emphasized to extend concepts of spatial awareness, relocation and balance and to encourage the development of body projection skills utilizing limited ground contact. Basic gymnastic skills acquired during elementary school years serve as a foundation for learning standard stunts required in competition on all pieces of apparatus. Capsule programs have been developed to assist students at a wide range of individual performance levels to work independently in large group instructional settings with minimum supervision. Creative exercise routines offer opportunities for fun and novelty as well as for the satisfaction of skill achievement.

Track and field activities are stressed and extended to include outdoor challenges in locomotion, balance, and skillful performance on land surfaces modified by sand, snow, or ice. All students are introduced to ice skating and skiing. Unique forms of body projection and locomotion, more advanced skills in object projection, and concepts associated with physical activity as recreation, catharsis, and risk-taking can be meaningfully experienced in such contexts.

Middle school organization offers unparalleled opportunities for socialization through the development of team sport and social dance skills. Skill development and team strategy are stressed in the familiar team games which are popular in the community. Teamwork concepts are highlighted through instruction in soccer, touch football, basketball, volleyball, hockey, and softball. Group games which reflect the recreational interests of young people in other societies are also introduced. Students from differing subcultures within the larger Update community share such aspects of their heritage with each other. Exchange students from other countries and local citizens or foreign visitors who have lived in regions where other games are popular provide key resources. Social dance offerings include traditional dances, American square dance, folk dances of many lands, and current popular dance forms. Opportunities for healthful competitive sport and for corecreational dance are varied and extensive in middle school extraclass programs.

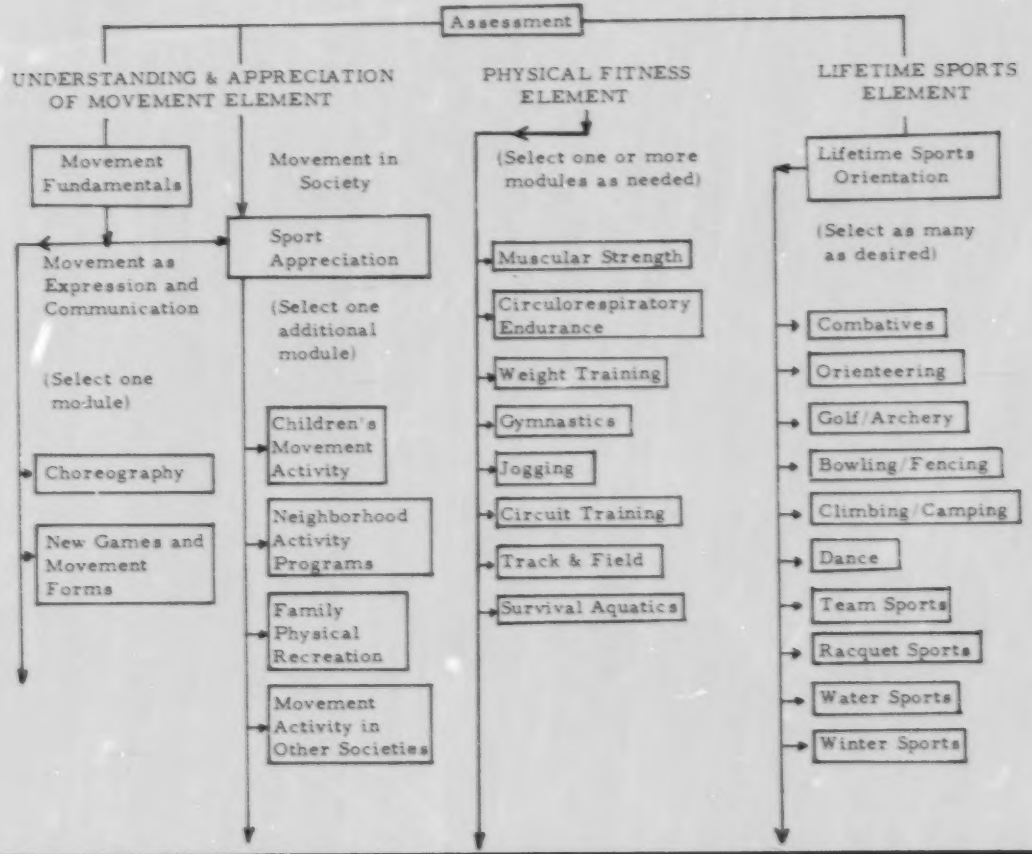
The last five years have been unsettling ones in many American secondary schools. Now, in the 1971-72 academic year, Update High School seems to be sorting out some of its priorities, resolving certain confusions of the late sixties, and finding some redirection for curricular emphases. Building and subject-field curriculum committees have identified both annual and long-range educational priorities. For the past three years, all curricular areas have faced the challenge of accountability through the statement of curricular goals and the development of both summative and formative evaluation programs. Increased individualization of learning opportunities has been implemented by more flexible graduation requirements, more options in course offerings, more self-directed study. The high school is now using modular scheduling with considerably greater effectiveness because of the expansion of open laboratory and independent study programs. Student responsibility and involvement in decision making are being encouraged through an open campus organization, self-management in the classroom, student representation on policy-making committees, student participation in curriculum development, and the delegation of more significant responsibilities to the student council.

The district-wide physical education curriculum committee includes parents, students, and administrators, in addition to the physical education curriculum coordinator and selected physical educators with teaching assignments in elementary, middle, and high school. During the past three summers selected physical educators have been employed to write statements of educational objectives, to develop improved evaluative criteria and procedures, and to project needed program changes. Last year a cadre of eight teachers, representative of one middle school attendance district, including four elementary school, two middle school, and two high school physical educators, met weekly on a half-day released time pattern to give leadership to curricular change with the focus on the middle school pupil. This year a similar group representing a second attendance district is studying possible improvements in middle school physical education. Next year the leadership responsibility will be rotated to the third middle school. The following year, it is planned to allocate staff time and research resources with major emphasis on upgrading physical education for the high school student.

The present high school physical education curriculum has three elements, each corresponding to one of the major goals: (1) understanding and appreciation of human movement, (2) physical fitness, and (3) lifetime sports competence. Students are expected to demonstrate achievements in each of these areas. Entering high school students participate in an assessment unit during which individual status with regard to each area is determined. (See Table 4.)

TABLE 4

UPDATE HIGH SCHOOL PROGRAM



Currently, knowledge tests predominate in the assessment of understanding of movement principles; but high school staff members are already working with middle school teachers to develop performance tests in which the individual demonstrates his understanding of basic principles of movement through actual movement solutions to problems or tasks set for him.

Physical fitness is assessed through the usual measures of strength, flexibility, and circulorespiratory endurance, plus ratings of static and dynamic postures. Individual scores are recorded as a basis for further conditioning and fitness maintenance. Students making low scores are counseled toward specific conditioning regimens immediately.

Attitudes toward physical activity are assessed through paper and pencil tests. These scores are used primarily to gain additional insight into effective means for motivating students in physical education and to suggest curriculum content. Attitudes toward physical education are also evaluated by a questionnaire instrument designed to provide feedback to the middle school staff and guidance to high school teachers and administrators in making physical education more relevant, enjoyable, and meaningful.

Movement performance assessment is based primarily on middle school records of performance in batteries of skills and knowledge tests designed to demonstrate levels of proficiency in particular sports, dance, and gymnastics activities. These serve primarily as classification tests in placing individual students into instructional sections in beginning, intermediate, and advanced classes in specific sports and dance activities. Competency tests are also administered at the high school during the last two weeks of the fall, winter, and spring seasons.

The first element, understanding and appreciation of human movement, consists of three modules: movement fundamentals, movement as expression and communication, and movement in society. If it is determined through the evaluation procedures applied in the assessment unit that the student needs to review the fundamentals of movement emphasized in elementary and middle school physical education, he is scheduled for this module first. If he already meets the minimum standards with regard to posture, body mechanics, and intermediate knowledge of movement principles, he may bypass the movement fundamentals review unit or module and move directly to another of the program modules in this element.

In the module designed to focus on movement as expression and communication, each student may select from among several submodules in choreography or the development of new games or movement forms. Experiences

in choreography are not restricted to modern dance, but can also be selected by students interested in creating a water ballet, free exercise routine, or living statuary tableaus; designing movement sequences for musical and theatrical productions; staging a physical education demonstration; or programming movement for film or television showings. A student who is intrigued with the analysis of sports skills may select some performance problem and try his hand at working out a new skill technique. Some students, singly or in small groups, have invented novelty events for local track and field days, archery meets, or aquatic fun nights. Occasionally students motivated to invent something personally relevant have produced new games, original dances, or unique movement activities which might popularize the successors to the hula hoop, frisbie, and skateboard.

The movement in society module includes an introductory sport appreciation submodule programmed for all students and additional submodules for further individual choice. The sport appreciation submodule provides a brief overview of the historical role of sport in various cultures, explores the critical role of movement in child development, highlights basic concepts of sociology of sport and of sport psychology, and identifies contemporary social problems relating to sports participation locally, nationally, and internationally. This submodule is a prerequisite to others in the movement in society module. The student chooses at least one submodule in guiding movement activities of children, leading neighborhood activity programs, planning family recreation activities, or movement activities of other societies or particular subcultures.

The second physical fitness element consists of three modules: muscular strength, circulorespiratory endurance, and survival aquatics. The student who demonstrates adequate strength and endurance in the assessment unit may bypass the first two modules completely. The student who needs further development of strength or endurance may select submodules in weight training, gymnastics, jogging, circuit training, or track and field. Or he may prefer to move into other sport or activity modules, such as orienteering, basketball, or handball, to increase his strength or endurance. Most students complete survival aquatics as ninth-graders, although 20 to 30% of the high school students need additional work in this area. Many can demonstrate proficiency in the entire fitness element without enrolling in any of the "fitness" instructional modules.

In the third element, competence in at least two lifetime sports is required of all students for graduation. A short sports orientation module is scheduled for all sophomores, emphasizing the advantages of voluntary participation throughout life, suggesting procedures for planning personal

activity programs, and providing information about available curricular choices and competence standards in each sport. Competence standards are practical tests of ability to participate at an intermediate skill level, as, for example, a particular bowling handicap, a standardized minimum archery score, a given performance classification in skiing, a judge's rating in gymnastics, or an appropriate competitive classification in tennis. The student is free to select any of the many lifetime sports activities offered at beginning, intermediate, or advanced levels, depending upon his ability level. The graduation requirement ensures that he will have met designated standards in at least two sports.

All students are individually programmed. Except for the initial assessment module, one expressive movement module, the sport appreciation module, one additional movement in society module, and the lifetime sports orientation module, students may select any activities for which they meet the class entry qualifications. Physical education is a required sophomore subject; juniors and seniors who have demonstrated the required competencies are not required to continue in the physical education curriculum, although most students elect additional units. Elective study in physical education includes, in addition to the curricular content already discussed, offerings such as history of sport, sociology of sport, sport psychology, and physiology of exercise, scheduled as semester courses or units within courses developed cooperatively with faculty of other departments.

The physical education programs in the Update Public Schools illustrate the selection of particular curricular alternatives based on a purpose-process conceptual framework for curricular decision making in physical education. Many different choices are available. Sound contemporary physical education curricula are characterized by diversity, while reflecting the same general concepts. The conceptual approach does not do everything. But, as Arthur Foshay says, in discussing Curriculum for the '70's:[8]

> . . . At the bottom of each discipline is a set of concepts of great generative power. These generalizations are the ordinary vocabulary of the educated. They serve to bring order out of the buzzing confusion of the world and convey much greater power to the individual who possesses them than he would have without them. . . It is worth stressing that those who possess these concepts have more autonomy, and are hence freer to govern themselves, than are those who do not have them. They are hard won, these ideas, but they are worth it. . . .

The physical education builders of the '70's need to free themselves from repetitive seasonal-cycle curricula and dare to demand more of the brickmakers. They should insist on bricks made to order for the edifices of their own communities. They need to clear the loose bricks from the brickyard in order to construct curricula on soundly laid foundations. They need to create imaginative blueprints of broad curriculum theory to extend horizons and give guidance for ending the chaos in the brickyard.

Notes

1. Adapted from Bernard Forscher, "Chaos in the Brickyard," Science 142 (Oct. 18, 1963), p. 3590.

2. Judson Jerome, "The Living-Learning Community," Change (Sept. 1971), p. 55.

3. Philip W. Jackson, "The Consequences of Schooling," in The Unstudied Curriculum: Its Impact on Children, Norman V. Overly, ed. (Washington, D.C.: Association for Supervision and Curriculum Development, NEA, 1970), pp. 14-15.

4. The purpose conceptual framework is a result of group study during the past year at the University of Wisconsin. Major contributors were: Peggy Chapman, Sheryl Gotts, L. Sue Jones, Douglas Knox, Sandra Knox, Marie Mullan, Leroy Smith, R. Peter Bauer, James Francis, Wilma Harrington, Marilyn LaPlante, David Uhrlaub, Emily Watson, Donald Brault, Philip Pabich, M. JoAnne Safrit, Sarah Robinson.

5. Ann E. Jewett and others, "Educational Chance Through a Taxonomy for Writing Physical Education Objectives," Quest XV (Jan. 1971), pp. 32-38.

6. David R. Krathwohl; Benjamin S. Bloom; and Bertram B. Masia, Taxonomy of Educational Objectives, Handbook II: Affective Domain (New York: David McKay, 1964), p. 6.

7. Benjamin S. Bloom, Taxonomy of Educational Objectives, Handbook I: Cognitive Domain (New York: David McKay, 1956). Also Krathwohl, Bloom, and Masia, loc. cit.

8. Arthur W. Foshay, Curriculum for the Seventies: An Agenda for Invention (Washington, D.C.: NEA, 1970), pp. 29-30.

RATIONALE AND PURPOSES FOR PHYSICAL EDUCATION

Jan Felshin
East Stroudsburg State College
East Stroudsburg, Pennsylvania

Purposes are statements of intent that represent the beliefs and values from which they derive and, at the same time, indicate direction for developing programs. Statements themselves, however, can be cryptic with reference to the theoretical responsibility they bear, and that is why diverse programs often seem to claim similar purposes. Curriculum contracting and learning packaging notwithstanding, it is important that those who purvey programs be able to identify, clarify, and order the purposes upon which they depend. When this is so, individuals with program responsibility, whether as formulators or teachers, understand the rationale for the kind of experiences they provide or supervise. It is understanding what one is trying to do that is central to success in both teaching and learning. And when one's goals are not only clear but valued, there is little problem in deciding how to attain them.

Teachers, like machines and students probably can be programmed to behave in certain ways. The presumption of programming is that understanding is not a necessary concomitant to application. But if commitment and enthusiasm are crucial dimensions of the human and learning transaction, that assumption is abhorrent. It is, of course, the humanists who have always insisted that curriculum development should be an ongoing process and that all of those with program responsibility should be involved in it. That insistence has stemmed from democratic beliefs in the rights of individuals to participate in making decisions that affect them and from allegiance to principles of learning that suggest the relationships among involvement, understanding, and commitment.

There is, however, another reason for widespread and continuous efforts to identify purposes for physical education programs in schools. All of the beliefs and values that provide the sources for purposes (1) are changing continually, as knowledge is developed and as value-priorities are redefined and (2) are always available for interpretative refinement. Physical educators have not agreed upon the theoretical concerns of the field and that means that purposes for programs, which are the most commonly used expressions of attitudes toward theory, have been confused. This confusion has had several unfortunate but familiar manifestations:

1. Lack of ability to discriminate among purposes has resulted in purposes becoming additive; that is, new

insights or formulations of intent have simply been added to existing ones with the resulting long lists of unordered purposes.

2. Confusion between intent and effect has led to alleged benefits of physical education being identified as purposes without reference to theoretical appropriateness.

3. Beginning with the Seven Cardinal Principles of Education in 1918, physical education has accepted all educational obligations and commitments as its purposes and the integrity of the field is frequently obscure in its statement of intent.

4. The conventional wisdom of familiar purposes means that they are often ignored altogether, and curriculum process is likely to be approached by assuming that purposes are obvious and need no attention.

It is a tribute to the importance of physical education and the efforts of its practitioners that it has survived in education and is represented by excellent programs in many places in spite of the prevailing confusion about its worth and direction. As educational times change, however, diffuse and inarticulate justification for enormous and disproportional requirements of time, space, and money are not sufficient. If, as we suspect in education, the "going is getting tough," then, it is clearly time for the "tough to get going." For us, this means developing effective programs based on rationales appropriate and important to our field and to education, and clarified in expressed purposes whose fulfillment in programs can be established.

As statements of intent, the validity of purposes does not lie in the worthiness of their concerns alone. That is, contributions to the welfare of humanity may all be valid as human goals, but are not all equally valid in their relevance to the role of the school. Any educational purpose must be evaluated in relation to knowledge and values about society, and about the individual and his learning, but is finally acceptable or not on the basis of its appropriateness to the role of the schools. The rationale for purposes of physical education begins not with the ways in which this field can contribute to the lives of children and youth but with answers to the question of why it should be in schools at all. And the potential of its contribution, no matter how great, is not an adequately logical answer to that question.

"What is physical education?" we have asked throughout this century and we have answered with lists of activities, or purposes, or benefits, and occasionally even with the statement that it is, in fact, education itself--of, and/or, through the physical.

In the last decade, the profession of physical education has established clearly that in addition to its existence as programs in schools, it is also an identifiable field of knowledge and study. The framework for understanding physical education in schools and selecting purposes for programs depends first on cognizance of its field of study. That is to say that curriculum theory is based on ideas about what is to be included in the schools as content in relation to what the world is like, its relationship to the individual and his development, and what is desirable for people to become. Pervasive goals for all education can be identified, but purposes for any specific area of the school program must be related to its unique and defined concerns.

The rationale for school programs of physical education express a framework of knowledge and belief about the nature of the field itself and about what aspects of the field represent it as appropriate and important educational concerns. As these are identified and selected, they are considered in relation to educational goals and commitments and modified to express purposes for programs.

Purposes, of course, can be stated in several ways. There are program purposes that suggest implications for the kinds of activities and experiences to be provided; teacher purposes that imply guidelines for organization and instruction; and student purposes that imply goals to be reached by individuals. All of these are important and since each expresses its own guidelines for both action and evaluation, they may all be necessary aspects of curriculum definition. In general, though, we are coming to see that stating purposes as student goals, or objectives of behavior, contains the most promise of clear implication for program experiences and evaluating achievement.

The process of developing purposes can begin anywhere; with a purpose itself, or with a guideline for school experiences, or with statements of belief or value about physical education, society, education, or the individual and his learning. Ultimately, purposes are stated but the foundational beliefs and implied program experiences must also be understood in relation to them. Purposes must be related to the nature of physical education and must be consistent with educational goals; after that, evaluating their validity depends upon theoretical views and available knowledge.

In order to really understand purposes as summations of theory and guides to action, it is necessary to analyze them with reference to the processes by which they were developed. This means that whether directly implied by the statement of purpose itself or not, some effort must be expended toward understanding the foundational assumptions about the school and physical education from which the purpose was derived. At the same time, the implications for program must be clarified to yield full insight into the intent of the purpose. Each statement of purpose must be questioned by those who developed it and by those who would understand it. "Why is that purpose important?"; "What assumptions about the role of education does it suggest?"; "Are its assumptions subject to validation either as an outgrowth of logic or evidence?"; "What are the bases in knowledge that support the purpose as appropriate and capable of being fulfilled?"; "What implications for student behavior are suggested by this purpose?", and "How would this purpose be actualized in experience and evaluated?" are all questions that should be asked about every single statement of purpose.

Beyond the analysis of specific purposes for school programs or student behavior, the relationships among purposes must also be analyzed; for it is in identifying purposes that the framework and rationale for the whole program is expressed. Purposes, therefore, can provide an ordered expression of theoretical positions, and because of their viable and interactive relationship with program and experiences become crucial elements of the process of continual evaluation and refinement that are cornerstones of curriculum development.

Guidelines for the Development and Evaluation of Purposes

Content

1. Purposes must be directly related to knowledge appropriate to the concerns of physical education.

    a. They may reflect the importance of knowledge about man as he pursues movement activities; the ways in which movement is related to human functioning; ideas about effective or efficient movement; the nature of sport, dance, or exercise as movement forms, or the experiencing of movement forms.

    b. They may reflect the importance of experience and/or development and functioning in relation to movement itself or sport, dance, and exercise.

2. Purposes must be defined and understood as contributions to broad goals and commitments of education.

   a. Foundational assumptions about the role of education, social realities and/or commitments, and beliefs and knowledge about individuals and how they develop and learn must be identified and related to purposes.

   b. The implications of purposes must be clarified so that the presumed effects of the experiences they suggest are explicit.

Process

1. One approach is to use a model to show relationships; e.g.

   Foundational Assumptions <-> Purposes <-> Implications

   a. Internal validity would have to do with the relatedness of the knowledge and ideas involved, as well as meaning and accuracy.

   b. External validity would depend on the worth of the knowledge involved and judgments as to the importance of the ideas.

2. Purposes should be stated as student goals with the implied understanding that the goals of the program would be stated in terms of providing opportunities for the achievement of these goals, and teacher-goals would have to do with organizational and instructional dimensions of enhancing the possibilities of goals being achieved.

   a. Goals can be stated so as to imply perceptual, cognitive, or effectual abilities.

   b. Behavioral goals or objectives can be stated so as to be reflected in actual and observable behavior.

ON CONSIDERING CURRICULUM DESIGN

Deidre Burnstine
Glen Ridge High School
Glen Ridge, New Jersey

I'm here with you this morning not as the "expert" or scholar in curriculum design, but as a "doer," an individual who has gotten into the designing of a curriculum because the need and opportunity were there. Although I brought some preconceived ideas to the task, basically I am learning while doing.

I can't tell you what ought to be in a perfect situation or even hold up my program as one to be emulated... since I've only just begun, however, I can share with you the ideas and processes I am currently involved with. I can try to answer your questions--but from my beliefs and experiences, not from formal curriculum theory. I hope you will question what I am doing and trying to do, and that you will give me some much needed feedback.

Before getting into the matter of designing curriculum, I'd like to consider the question of where curricula have come from. Traditionally they have been culturally derived--which is good--but then, usually, they have just been passed on...and on...and on.....so that finally no one ever really knows where they came from, for whom they might be good, or why they may have lost validity. Thus, it behooves us, if we are going to design curricula for our contemporary society, not to make the same mistakes as the curriculum designers of the 20's and 30's did when they tried to design the school program of the, then, new physical education. I personally think that the great mistake of the past was the designation of very particular programs as that which alone is good and ought to be. These curricula, once perhaps very vital, have suffered from arteriosclerosis. Even in the hands of a dynamic teacher who might seem to be giving a worn down program a shot in the arm, to get the blood circulating again, it is a choice of reviving a dying body rather than starting off with new life.

Much of what I am saying today, and trying to do back home on the job, isn't really new. If you go back to some of the books written 15 to 20 years ago you find much of it there, though perhaps in different forms. The only problem with what is there is that the really important parts never went any further. For example, Cowell and Hazelton, in 1955, wrote about immediate or specific objectives in a way compatible with today's behavioral objectives. But from what I gather, no one bothered to make proper use of

these. I have no quarrel with their statements of the characteristics of a good physical education program - only very few programs seem to have used these as a yardstick. The trouble with Cowell and Hazelton's curriculum book, and others like theirs, is that specific activity programs for first through twelfth grades were graphically described. But instead of being used as germinal programs, these alone got endorsed, and handed down through the years, thus contributing to the stagnation of physical education curricula.

Thus I think that we as physical educators will make a grave mistake now if we just look around for some curriculum which has been labeled as up to date and lay it on our own school lock, stock and barrel. Good as it may be, it just may not fit our particular needs, school and community. And that was the big mistake of our predecessors. Today we are finding that "doing their thing" isn't especially good for us. I do not believe there is one single perfect curriculum which is good for all of us, for all times, places and students.

Before you can design a curriculum which will have relevance and validity for your situation, you need to have a pretty good idea of what you think should exist in your school and why. This first step involves a thorough examination of your personal and professional philosophies. Ask yourself how you view the role of the teacher - as a presenter of material or a facilitator of learning? How much freedom ought students have and how much do you think they can handle or learn to handle? Why physical education and what for? What are the current theories and practices in education and how does physical education fit in? If you don't know what is going on in contemporary education in general, and if you don't understand the kinds of kids we are working with today, you'll probably need to do some reading and talking to find out.

The emphasis which today's youth places on individuality and doing your own thing merits our careful consideration when designing curriculum. We need to provide for many "bags" rather than trying to stuff everyone into the same bag.

As you start to lay bare your own beliefs you also need to consider the relationship between physical education and your entire school curriculum. The school's curriculum reflects the community's goals for the education of its children. Does your physical education program? Both the school and physical education curricula ought to be congruous.

I have seen situations in which the general program and physical education programs operated at cross purposes, and wondered deeply about what the kids were really learning from the conflict. For example,

while visiting an Individually Prescribed Instruction school in which the kids were actively involved in learning in some very exciting ways, I peeked into the gymnasium (definitely off-limits to visitors) and saw the teacher sitting on a chair in the middle of the gym and a line of students standing still and silently, while, one at a time, each student hung from the stall bars. For another instance, during a visit to a non-graded elementary school in which a variety of innovative hard and soft ware were used I questioned the principal about the physical education program. It turned out that physical education was both traditional and graded. The principal had never before thought to consider the possibility that the non-graded, continuous progress system used throughout the rest of the program might well be extended to physical education where individual learning styles and rates as well as developmental levels also vary.

Of course, if you happen to have a traditional physical education program within a traditional school, there is no philosophical discrepancy between the two and I guess you might be justified in sitting back and saying there is no reason for you to make changes. Or, you might realize the incongruity between your entire school and the larger educational community and decide to become an innovator and leader within your school.

I am in a situation in which there is a discrepancy. Since September I have been the high school girls physical education teacher within a small, fairly experimental school system. Our three elementary schools are non-graded and committed to a philosophy of continuous progress programs. The middle school attempts to continue this with interdisciplinary teams and fluid grouping. The high school is, in theory, committed to building where the middle school leaves off and to providing in-depth opportunities as well as elective programming--although there is a strong conservative streak in the high school faculty. Whether the program K to 12 is completely effective and operative is really beside the point. The theory, which I find sound, is supported by the community. And, we all know that practice usually lags behind theory. But, the physical education programs throughout the systems are traditional and do not even have a theoretical rationale which fits with the rest of the curriculum.

The type of physical education curriculum which I can logically see fitting into my particular school is an individualized, continuous progress program culminating in opportunities for independent work and in-depth pursuit of interests. As I began to try to give form to this conception I saw a need to anchor the individualization and concomitant freedom in flexible but sturdy guidelines--which I call competencies. At a certain point in their development students ought to be making decisions about what they learn, especially in so highly a personal area as movement.

However, once a student makes that choice she very likely does not understand the subject matter well enough to decide how much she needs to know in order to do the activity reasonably well. This is really a decision-making area for the movement expert--the teacher--who should be in a position to determine at least minimal standards for competent performance. In a competency based program students select which activities they would like to become competent in, and then the teacher spells out what is necessary to achieve minimal levels of competency. Later on in the learning stage, as students are taught to "learn how to learn," students themselves can begin to make this type of decision.

Additionally, the one absolute requirement which I have for any secondary level curriculum I develop, is that it be dynamic and flexible, not static and rigid. As I have indicated earlier, I do not believe there is one perfect curriculum which can meet the ever-occurring changes in the teacher, the students, the learning environment and the community. I do not wish to waste my time nor that of my associates in developing something that might well be obsolete before it is fully implemented. Thus, the problem as I see it is not to design a curriculum but to design a flexible curriculum. To meet this criteria I am working under the assumption that putting important decision making responsibilities under the control of each individual student will insure flexibility. Teacher guidance will be provided to help each student learn to use her freedom responsibly to tailor-make her own program to fit her personal needs, interests and abilities.

Hopefully you now have an idea of the theoretical base from which I am operating. Now I intend to share with you my experiences in going about the process of designing a curriculum for my particular school.

My initial steps took form out of my superintendent's request that each teacher submit behavioral objectives for his courses by October 1st. This directive made it imperative that I very quickly get my thoughts together on the kind of curriculum I wished to develop. Because of his request my initial steps in curriculum designing took the form of writing behavioral objectives for every activity which could conceivably be included in my curriculum, I took the approach of specifying terminal behavior for each grade level. To decide on these behaviors I constructed a model of what my four-year program might look like.

To be perfectly honest, this model is not unique in terms of content. What is different about it is the inclusion of processes which call for student selection of specific activities and student involvement in decision making and program formulation. Perhaps the possibilities which are

open for doing physical education outside of the conventional class is also somewhat different, though by no means unique.

As I worked out my initial model I was able to more clearly formulate for myself the really key purposes of my program; namely, that:

1. Students achieve both psychomotor and cognitive competency in selected activities, thus enhancing the likelihood of positive affective learnings and the continued pursuit of these activities.

2. That students learn how to learn and how to help others learn.

3. That students, through positive, self-actualizing experiences, become self motivated, independent learners and doers.

4. That students become aware of the values of regular activity.

5. That students learn to appreciate good performance and what goes into making it possible.

With my general model and stated purposes for guides I was able to sit down and write precise but broad grade-level objectives for all four grades. Examples of my behavioral objectives are: By the end of the tenth-grade year each student will have demonstrated competency in at least seven activities, with at least one activity selected from each of the three major areas. And: By the end of the ninth-grade year each student will have demonstrated helping another student to learn, perform, or practice a skill.

Process as well as content is essential to my curriculum as a whole. Process and content are really inseparable and a consideration of one without the other results in distortion. For instance, competency in a particular area includes "how you get there" (for the teacher and the student) as well as the demonstration of arrival. The means are part of the ends. So too with curriculum design. My design has a rudimentary form, but without the processes it remains incomplete. Right now, at this point in the development of my curriculum, I am concentrating my attention on developing and acquiring the mechanisms and processes which will make the curriculum operational, and thus complete the design. This, I find, is the really tough part. The following are just some of the things which need to be done:

1. Establish competency levels for each activity, and criteria for evaluation. Also, devise procedures for their use.

2. Develop forms for continuous progress reporting and the recording of competencies.

3. Develop materials for individual and small group instruction for all skill areas.

4. Develop and acquire materials for a learning lab set-up. Also, find the space somewhere to set one up (fortunately my principal is at least willing to consider the possibility of knocking through the gymnasium wall into the locker room and eliminating one shower to make room in a place where there is no extra room!)

5. Design ways to route students and keep tabs on their progress.

6. Develop methods to facilitate freedom of choice in activity within the possibilities available in our small gymnasium.

Not the least part of the problem of doing the above sort of thing is the time and manpower available. I honestly do not know if I can get it all together, by myself, for next year. I am confident that a far superior job could be done if I did not have to go it alone. From my experience at the college level I know there are colleges and universities interested in tying in with public schools to develop programs and to provide for greater depth and range in clinical experiences for their major students. My principal and I have discussed this and we are looking into the possibility of linking up with some university interested in this sort of arrangement. If we can get together with the right place we could not only impact our program with additional personnel in the form of student teachers but we might also be able to draw on their faculty for assistance in developing materials, processes and even the overall curriculum.

Another area for which my principal has indicated concern is flexibility in scheduling. I know he is considering ways of breaking down artificial barriers which interfere with optimal teaching-learning environments.

I am also hopeful that help in my undertaking will come from innovative programs which have already come into being. The September JOHPER describes several and I am in the process of writing to some of the people involved to get more detailed information and find out if they are willing to share their work. Perhaps those of you here who are already involved, or are about to become involved, in designing new curricula will be willing to share your work too. While I again caution strongly against transplanting entire programs wholesale, I am confident that if we are willing to share what we do, we will help each other move forward farther and at a faster rate.

There remains the question of what do you do with your present program in the meantime, while you are designing a new curriculum and planning for change? Like all of you, I too have the immediate concern of running my present program. Because I was new to my position this year I couldn't very well simply carry on the "old" program--I plead ignorance of it. Thus, I am running an extremely eclectic program during this year. Certain things are being done in fairly traditional ways, but others in more radical fashion. I view this year as both introductory and transitional. In addition to getting to know my students, colleagues, administration, district and community, I am using this year to experiment, on a small scale, with ideas and processes which I think may work into the new curriculum. Part of my concern is to begin educating students in regard to terminology, procedures and responsibility which they will need to be able to handle in the new curriculum. I am learning about the readiness of students at different levels and stages to handle freedom in a responsible manner. I am finding out about the needs, interests and abilities of my present students (and they are an impressive group!) I am trying to create an atmosphere of mutual trust so that students will give me honest feedback about some of the things they are doing which differ from ways they have done things in the past. So far, I am greatly encouraged. One of my major goals at present is getting students to learn how to use task sheets and other teaching-learning devices so that they will become less needful of direct teacher instruction. Another is having seniors design an individualized course of study which may be pursued independently. Perhaps the most vital phase of curriculum design, when it comes to making it work, is developing appropriate vehicles to get it across--that is, teacher behavior which facilitates purposes and objectives.

I was once a very traditional type teacher, but as I became aware of certain things, and then committed to other values, I could no longer live with myself and continue some of my practices: thus I began making changes in my behavior--even if it meant a reversal of myself with the same students. You know, students can learn that teachers are human and capable of change --and be very accepting of apparent inconsistency in teacher behavior when it results in more humane and more effective teaching. As you consider possible changes in curriculum you may find that you feel very uncomfortable with some of your old practices. Rather than waiting for your new curriculum to be complete and ready to implement before you begin changing your approach, I suggest that you begin trying to make changes in yourself now --experiment in alternative styles of teaching. There isn't much value for you or your students in continuing to practice what you can no longer in good faith preach. During the time that you are working on designing your curriculum do not hesitate to test out your ideas in a series of pilot programs within your own classes. What better laboratory could you have

than the very one the curriculum is to be designed for? As Ethel Perrin, a once strict formalist, said, "be willing to throw past practices to the winds if they do not fit the situation, or shall we put it, separate essentials from nonessentials."

I hope that my conclusion and the end of this conference will be just the beginning for many of you. In closing, let me confide in you that at times I have my doubts and do experience difficulty in conceiving just how such varied activity, as proposed in my curriculum, is going to occur all at once within the confines of my small gymnasium. But, ever the optimist, I know it will be possible and that in the give and take that will be necessary students will benefit from some of those unplanned for happenings which often are the most significant part of any curriculum.

EVALUATION: THE PROGRAM AND THE PERSON

Norman Sam
Lehigh University
Bethlehem, Pennsylvania

I recently visited one of the wealthier suburban communities on the West Coast. I arranged to meet with an old friend of mine who was the Assistant Superintendent of this school district. I was interested primarily because my niece's children attended this school in this district, and also because I had noted that they were on split sessions. We did manage to take a look at their split session program at the elementary level.

This was a suburban community which in the past 15 years has had a tremendous increase in population. As a result school building could not keep up with this increase and many mobile classroom units were in operation. In the past two years, however, a dramatic change has occured in terms of the direction of the population growth. The already extremely large airport needed to be expanded and the most obvious way to expand it was into this community. Therefore, as the airport acquired more and more land, the population began to decrease.

Although the schools are extremely overcrowded at this point, it is rather obvious that they cannot embark on a long term building program, nor can they continue to utilize increasing numbers of mobile units. As a result the school district chose to go on split sessions in the elementary schools and on "early leaving sessions" in the secondary schools. Prior to the change, the school district personnel listed their various programs in order of priority and time required in both the elementary and secondary schools. It was then simply a matter of working down the priority listing until time ran out. As it will be rather obvious to you, the extra curricular activities were low on the priority list, however, I noted that one of the basic components of any elementary school program was placed at the bottom of the priority list. This (I hate to report to a group such as you) was the formal physical education program. I also noted that the formal physical education program, which we commonly refer to as gym, was near the bottom of the priority list for the secondary schools. The rationale used for placement of the program in this position on the priority list was that the board believed that the physical education program was involved only in providing children with an opportunity to engage in activities which they would engage in anyhow if they had free unsupervised time. Since kids are normally active, normally run around and normally become involved in small group games, it was not necessary for the school to continue to assume this responsibility and the additional cost.

The same rationale applied to the secondary school program moved the formal physical education program into an elective activity category. Since the "early leaving program" has been in operation, some elective physical education activities remained in the schools and a steadily decreasing enrollment is becoming apparent. The students are tending to cluster their required courses or components for graduation. As soon as they finish attending the basic academic program, they leave the schools. The elective gym program will almost certainly disappear. Although this will be no surprise to you, I must report that the school maintains its interscholastic athletic program at the high school level and the school board still supports it very strongly.

I have little sympathy for the physical education personnel in this school district. That they lost their place of employment does not concern me since while they were employed, it was rather obvious they had done a pretty poor job. They had not bothered to educate and inform the school, its personnel, and the community in relation to the objectives of their program. Their contribution to the development of the children was not recognized and the relative importance placed on this educational component made it a low priority item which disappeared when there is not enough time. In some school districts which have not quite felt this pinch in terms of time but rather in terms of money similar decisions are being discussed. I am already aware of a school district that maintains its elementary physical education program for a purpose and objective very much different from the one which I am sure, you people have. This program provides an opportunity for the classroom teacher to be given "breaks" in their schedule during the day.

Providing breaks for teachers is poor justification for incorporating an expensive program in any school. Any program which exists within the educational institution, must have a clearly defined set of objectives and these objectives must be compatible with and contribute to the satisfaction of the overall educational objectives of the institution. These objectives must be visible to all members of the institution and accepted by them. If they are not, the program will likely disappear from the scene.

In the evaluation of instructional programs or components of instructional programs, one of our primary concerns must be that of the complex interrelationships which exist between the sources of input and the sources of output which we attempt to measure. These tell us: What is good? What is bad? What changes are needed? It is fine for us, as teachers, to point to the final performance of a student, after we have very religiously written our objectives in behavioral terms, and

indicate that the student has performed in an acceptable manner. This in turn may be used as evidence that our program is successful. It is not so fine, for us as teachers, to use as evidence of failure, the low level of proficiency displayed by a student. Without having developed a system whereby we can measure growth from a beginning point to the product and without being able to identify the contributing agents in this process of development, we can not conclude anything as to the success or failure of any program.

Let me attempt to illustrate this point. I live in a region where the National Sokol group is quite active. As a result many of the children who are enrolled in the public schools are also enrolled in the gymnastic program which is offered locally at the Sokol's Hall. How could we, in measuring the final performance ability of these students in school in relation to specific gymnastic proficiency, attribute their performance to the effectiveness of the formal physical education instructional program in the school. How can we attribute the success of the pupil, who is taking private instruction in diving or in ballet, to the program which the public school is offering? If we are not extremely sensitive to the contribution of external inputs, external being outside of our school environment toward the achievement of some of our objectives within the school environment, then I think we are missing an opportunity to improve our programs. Little mention has been made of the development of educational objectives or the writing of them in behavioral or performance terms. Previous presentations have made specific note of this. Support and repetition of these observations will serve little purpose. Some of the disadvantages, in relation to evaluation which objectives written in behavioral terms might have should be noted. An attempt will be made to alert you to some of the early studies which deal with achievement in relation to the design of curriculum programs utilizing "behavioral objectives". There are three outcomes of research which I think are of importance. The first and second are closely related.

Students who have been taught by teachers who have utilized instructional programs which were designed and built around behavioral objectives tend to develop a more negative attitude toward these teachers than do the students who have worked with teachers who did not have a set of clearly defined objectives. The second deals with the behavior of teachers. It appears that when teachers have very clearly defined goals which are measurable by performance testing, that they tend to develop what is referred to as tunnel vision.* The goal being so clearly defined and the

*Robert Piatt, "An investigation of the effect teachers, trained in defining, writing, and implementing educational behavioral objectives, have on learner outcomes in a seventh grade mathematics program." Doctoral dissertation, Lehigh University, 1968.

route toward achieving that goal being so clearly spelled out, the teacher tends to move almost in a straight line to that goal and refuses to allow the controlled instructional environment to be altered from its predetermined course. The teacher, therefore, in moving directly toward the achievement of that objective utilizes only those materials which are specifically designed for this role, and refuses to allow any external input in relation to the accomplishment or the achievement of any specific objective. An apparent result of this tunnel vision is that the students who have played no role in the design or implementation, develop a more negative attitude toward the adult who is controlling the environment.

It is so easy to overlook what is probably the most important area of learning, the affective domain. So often we tend to accept that the affective area can not be measured and, therefore, ignore its existence. In physical education it is easy to define psychomotor and cognitive objectives in performance terms but what a cost to pay for performance if we develop negative attitudes with our children as they proceed toward the various levels of proficiency. Perhaps the mere performance of some physical feat at a high level of proficiency is not really the route toward achieving the long range goals of physical education.

An interesting side light is a study which was just reported out of West Virginia University. It appears as the number of years of experience increases, teachers' receptiveness to behavior objectives decreases. Another shortcoming of the utilization (or misutilization of behavioral objectives, in relation to evaluating the effectiveness of any school program, is that the normal testing period usually occurs immediately following the student's involvement in the activity. As a result, there is a tendency to make long range judgments and decisions on short term results. An illustration of this could be an individual who may have satisfactorily performed in relation to almost all of the objectives of a physical education program during his high school days but who subsequently in development of a priority listing for his life style did exactly what our earlier mentioned school district did. He placed the importance of a continual, sustaining individual physical education program at the bottom of the priority list. As he found himself caught up in the American attempt at becoming a "professional success," he lost almost any concern for the body image. His self-concept completely ignored the existence of a body. As a result he sustained a heart attack at a very early age. This is not a unique situation. It is one which can be read about almost any day. Pick up the newspaper and read the obituary column.

We must evaluate not only immediately following the achievement of proficiency which occurs after being involved in a developmental

program but also in terms of the long term retention of the actual competencies developed. What we could expect then is that the individual, outside of the controlled school environment, may not totally reject all of the program. The objectives must be the child's and he must be in on their design and their evaluation.

An evaluation must, at all times, aid the decision maker in making decisions. It must be continuous type activity and one which will very clearly point the direction for any changes within the program. In effect, if an evaluation of the program does not aid the teacher in making decisions concerning the problems which he faces, then it has merely been meaningless, a mechanical procedure. It is important to be aware as to what institutions and individuals within institutions may think of evaluation. In many cases, studies are beginning to show that those members of educational institutions who feel insecure and, who because of their incompetence have reason to feel insecure, are the ones usually rejecting almost in total, any efforts of evaluation of the status quo. These are usually the type of persons who long ago found the answer to all of the problems facing educators, whether they be in physical education or anywhere else and who now may ask "why should we change." They usually rationalize with the "change for change's sake" bit.

A second red light which should indicate problems is that so often institutions tend to provide evaluators with what the evaluators would like to have in the way of an ideal program. As a result the visitor tends to see a reality that in fact does not exist. Too often, we praise the status quo and discover that if we can squint our eyes just right, we have the ideal program. When this occurs, decisions were made long before the evaluation. The decision was to maintain the status quo. Why even bother with an evaluation?

Much of what I said earlier dealt with the basic program although under no condition can the human aspect be divorced from the program. In summary of the program in evaluation we must:

1. Clearly define the objectives for a program but at the same time keep it flexible and receptive to change.

2. Keep the evaluation process of the program "on going" and make the necessary changes in the objectives as they are uncovered.

Since it is almost impossible for you in an ongoing program to achieve closure in terms of research, accept that a continuous evaluation is the one tool which remains available for program improvement and

that any periodic spurt toward total change of the curriculum will usually result in a very small increase in effectiveness. Curriculum changes must occur continuously.

The value of new input cannot be overlooked. Whether in the form of new knowledge, changes in values, or in the interaction with students. If we, as teachers, do not provide an opportunity for our students to develop with us the objectives for a program and to work with us in evaluating these programs then we must question whether we will ever succeed in achieving our long range goal in terms of self-concept development. We must remember that Program Evaluation is an Academic Audit Similar to the Internal Financial Audit.

The following are two models which may be adapted for use in the redesigning of objectives and the development of a program for physical education. Although space will not permit a detailed explanation and interpretation of these, further information can be found in the bibliography.

These models were designed primarily for project or program evaluation. I would suggest that the Guba matrix should be extremely useful in program design and that the Scufflebeam model should be used in relation to the total evaluative process.

MODIFIED VERSION OF STUFFLEBEAM CIPP MODEL, 1967

	OBJECTIVES	METHODS	CHANGE DECISIONS
CONTEXT	Operating context need assessment Causes of needs	System description of socio-economic environment	Changes in goals, priorities, and settings
INPUT	System capabilities Existing strategies	Existing man and material resources	Sources of support Solution strategies
PROCESS	Procedural defects Survey of events and activities	Project monitoring (Congruence evaluation)	Implementation and modification of procedures
PRODUCT	Outcome information	Analysis of criteria, measures, assessment	Continuance or change in project with other projects

STRATEGIES FOR EDUCATIONAL CHANGE

Egon Guba

TECHNIQUES	Value	Didactic	Psychological	Economic	Authority
Telling					
Showing					
Helping					
Involving					
Training					
Intervening					

BIBLIOGRAPHY

Adelson, J. "The Teacher as a Model." In The American College, edited by N. Sanford, pp. 396-417. New York: Wiley, 1962.

Alkin, Marvin C. Towards an Evaluation Model: A Systems Approach. Los Angeles: University of California, Center for the Study of Evaluation of Instructional Programs. 1968.

Carroll, John B. "Basic and Applied Research in Education." Harvard Educational Review 38, no. 2 (Spring 1968), pp. 11. 263-276.

Cotrell, Leonard S., Jr. and Sheldon, Eleanor B. "Problems of Collaboration Between Social Scientists and the Practicing Professions." Annals of the American Academy of Political and Social Science 346 (March 1963), pp. 126-137.

Hammond, Robert L.; Stuttlebeam, Daniel L.; and Guba, E. Planning and Implementing Title III Evaluations. Tuscon, Ariz.: EPIC Evaluation Center, University of Arizona, 1968.

Harris, C. W., ed. Problems in Measuring Change. Madison, Wis.: University of Wisconsin Press, 1963.

Klineberg, Otto. "The Problem of Evaluation." International Social Service Bulletin 7, no. 3, 1955.

Lehmann, Henry. "The Systems Approach to Education." Audiovisual Instruction, Feb. 1968, pp. 144-148.

Stufflebeam, Daniel L. The Use and Abuse of Evaluation in Title III. Columbus, Ohio: Ohio State University, Evaluation Center, 1967.

Tyler, Gagne, and Scriven. Perspectives of Curriculum Evaluation. AERA Monograph Series on Curriculum Evaluation. Chicago: Rand McNally, 1967.

WHERE ARE YOU GOING? WHAT ARE YOU GOING TO DO?

Tom Evaul
Temple University
Philadelphia, Pennsylvania

It is traditional that a conference such as this conclude with a look to the future. An indication of the direction we should take and the trends we can anticipate should be optimistic so that we can leave, fired with enthusiasm to tackle the task ahead, knowing that bigger and better programs will result from our efforts.

A look to the future we can all take. The view we see will depend on our perspective and how we interpret it. For those in the lowlands, the mountain may serve as a challenge to be scaled, or an insurmountable barrier of frustrations. Those on the peaks may view the valley as an ominous drop to be avoided or they may raise their eyes upward viewing the heavens with the optimism of an exploring astronaut.

Some of you may have recognized the source of the title of this presentation. It is from the title of a humorous book written a few years ago about a child. When asked by his mother "Where are you going?" his reply was "Out." When asked "What are you going to do?" his reply was "Nothing." These same questions may well be asked of ourselves and our colleagues. Where <u>are</u> we going? What <u>are</u> we going to do?

Wouldn't it be great if we could answer these questions with optimistic cliches such as "Up" and "Forward" and cite recent innovations in movement education, motor perception, and individualized instruction as a course to be steered? But as one faces the mountains of problems that beset our schools today, it is difficult to be optimistic.

I have observed with increasing anxiety the growing clouds of dissention and dissatisfaction among the splintering groups of our society. Conservative taxpayers demanding austere budgets; frustrated teachers demanding more resources and compensation while being reluctant to accept accountability; dissention among races, the sexes and numerous other classifications of people; promising innovative practices shattering against the resistance to change; kids dropping out and turning on to drugs and violence; the rejection of traditional values with little evaluation; greed, lethargy; lack of trust....and the list goes on. To the "gym teacher," whose public image seldom matches that of the reading or science teacher unless he is a winning coach, the mountains grow taller. How can he ever hope, with his "shovel" of motor skill and "pic" of physical fitness to tunnel his way through this mountain of problems?

We may well find ourselves responding as the child in the book to the question "Where are you going?" Out (out of the schools). Why? Because we may do nothing to keep pace with the rapid change in our world.

If we are to survive in the curriculum of the public school, where competition for time and resources is increasing among both traditional and new areas of study, the "tools" of yesterday will not suffice. We must seek out and employ promising alternatives, evaluate their impact, and adopt those which prove most efficient and effective.

The deliberations of this conference have revealed a number of potential alternatives. And more can be synthesized from existing material with some insight and creativity. Let us look for the moment at some of the alternatives to our traditional approach to the four components of the curriculum -- objectives, content, learning experiences and evaluation.

One of the areas that has been profusely discussed at this conference has been the purposes, goals, aims, and/or objectives of physical education. In this area, possibly too many alternatives exist. The history of our field is full of vacillation, indecision and disagreement concerning objectives. If there is one place that we need to arrive at some degree of agreement - it is here. Many criteria have been suggested for the selection of objectives, not the least of which is the currently popular one of relevancy.

If we can agree that man's behavior is primarily motivated by a desire to satisfy his needs, the task of selecting relevant objectives revolves around the identification of these needs and the contribution that physical education can make to their satisfaction. Few would disagree that physical education can contribute significantly to the satisfaction of man's physical needs. Objectives concerning motor skill and organic fitness exist in virtually every philosophy of our field. However, man is not a one dimensional organism. He has needs in his intellectual, social, emotional and spiritual dimensions as well.[1] If our curriculum is to be viable and relevant to youngsters, it must include content and learning experiences that will contribute to their growth and maturation in all five dimensions. To deal with anything less than the total person in physical education will result in an imbalanced curriculum and consequently an imbalanced individual. The alternative to our traditional objectives of physical fitness and motor skill is to develop objectives, the achievement of which will result in growth and maturation in all five dimensions: physical, intellectual, social, emotional and spiritual.

For curricular purposes, these objectives are best stated in terms of observable learner behaviors rather than the classic global form of all embracing vagueness. Stated in behavioral form, objectives become useful in selecting content, learning activities and techniques of evaluation. Following is an example of such objectives in each of the five dimensions, from a unit on physical fitness.

DIMENSION	OBJECTIVE
Physical	Run a mile in 6 minutes or less.
Intellectual	Explain the difference between muscular strength and endurance.
Social	Spot a partner executing a bench press so no injury occurs.
Emotional	Persevere at an exercise so that some improvement in performance occurs each week for 6 weeks.
Spiritual	Participate in a vigorous activity twice a week for at least 30 minutes each time outside of class.

In order to achieve an objective, content must be selected and organized in a manner that will stimulate the student to learn. What is taught and, most important, how it is organized will determine to a great degree whether or not the objective is achieved.

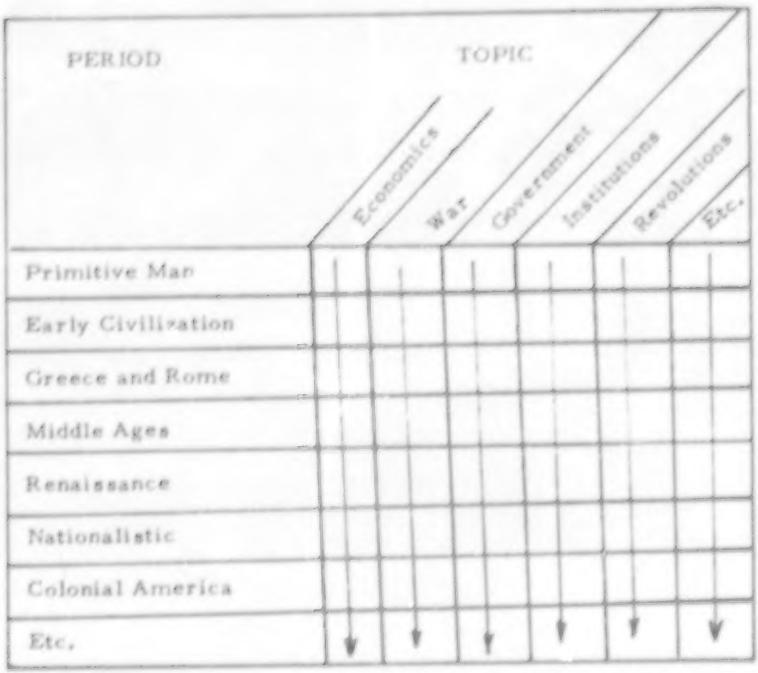
Curriculum and learning research has documented rather well the principle of specificity...if you want something to occur, then teach for it. This principle has had its effect on a key point in curriculum, the organizing center. The organizing center of a curriculum revolves around the approach that is taken to a subject. It is the viewpoint or focus around which the instruction is centered or organized. Organizing centers are generally represented by units of instruction. This concept is well illustrated by looking at the recent change that has taken place in secondary history programs. (See Table 1.) Traditionally, history has been taught from a chronological viewpoint with various time periods serving as the organizing centers. Consideration is given in each time period to such topics as politics, economics, institutions, revolutions, etc.

TABLE 1

PERIOD	TOPIC: Economics	War	Government	Institutions	Revolutions	Etc.
Primitive Man						
Early Civilization						
Greece and Rome						
Middle Ages						
Renaissance						
Nationalistic						
Colonial America						
Etc.						

The purpose of history, however, is not the amassing of knowledge for its own sake. Through the study of history it is anticipated that man will be able to apply what he has learned from previous successes and failures to alter his future destiny. For example, by studying the causes, conduct and outcomes of past revolutions in various civilizations, man may learn how to deal with the current social revolution in this country. As traditionally taught, however, little connection is made between the revolutions that occurred in different time periods. If, on the other hand, history was organized around such topics as revolutions, where many are analyzed and compared, and their causes, conduct and outcomes related and classified, one might discover some commonalities that would be meaningful in facing the current problem. This has taken place in the "new" social studies represented by the approach in Table 2.

TABLE 2



Such units as "Comparative Economic Systems," "Causes of War" and "The Anatomy of a Revolution" typify the new organizing centers developed in modern social studies curricula.

Physical education has traditionally utilized sports and games, dance and exercise as organizing centers for the curriculum through which the objectives of the program were achieved. This approach, represented in Table 3, assumed that such goals as fitness, skill, sportsmanship and cooperation would result from learning how to participate in such activities. However history and research have not borne this out. If physical fitness, for example, is to result from such a program, then lets teach it! Use it as an organizing center - select the knowledges, skills and attitudes about fitness that are to be learned and <u>then</u> decide which activities can be best used to get these points across. Dribbling a basketball is not going to make nearly as much of an impact on achieving our objective of running a six-minute mile (a

measure of circulatory-respiratory fitness) as understanding how the circulatory and respiratory systems respond to different types of training. Establishing individual jogging programs and evaluating the changes that occur from participating in these programs can be much more effective and efficient in meeting objectives dealing with fitness than can playing basketball. By just flipping the axis of that chart, a new alternative for organizing the curriculum exists (Table 4).

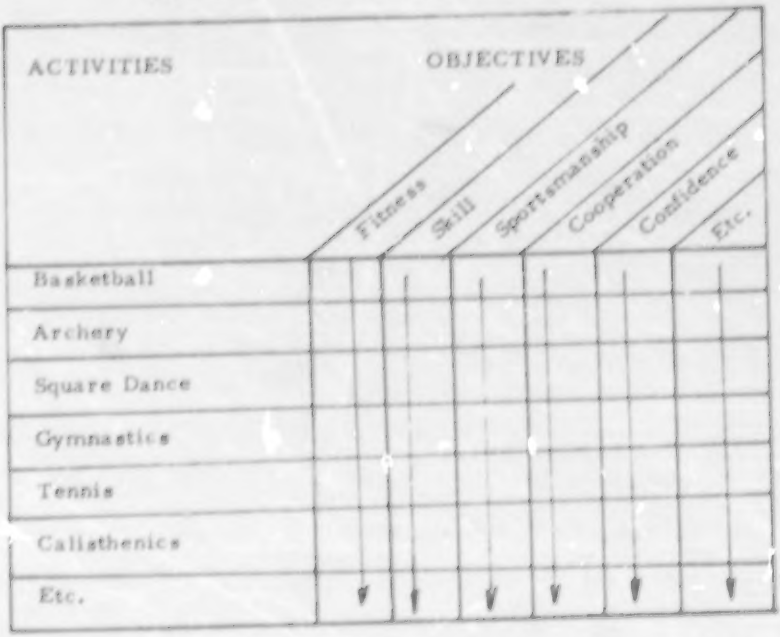
TABLE 3

TRADITIONAL ORGANIZING CENTER

ACTIVITIES / OBJECTIVES	Fitness	Skill	Sportsmanship	Cooperation	Confidence	Etc.
Basketball	→	→	→	→	→	→
Archery	→	→	→	→	→	→
Square Dance	→	→	→	→	→	→
Gymnastics	→	→	→	→	→	→
Tennis	→	→	→	→	→	→
Calisthenics	→	→	→	→	→	→
Etc.	→	→	→	→	→	→

TABLE 4

ALTERNATIVE ORGANIZING CENTER



Progressive elementary teachers, to cite another example, have developed teaching units around such skills as balancing, locomotion and ball handling in their movement education programs. Using big balls, small balls, round balls, oblong balls, heavy balls and light balls in a variety of activities, they are attempting to develop a movement repertoire of ball handling that can serve as a foundation for the learning of different ball games at some later time.

Certainly some ingenuity, planning and hard work will have to be used if this alternative is to be tried and evaluated, particularly in the social-emotional areas. But change never does come easy, especially in our schools. However, it is not so radical that we couldn't begin to insert some units into our curriculum during the year with different organizing centers.

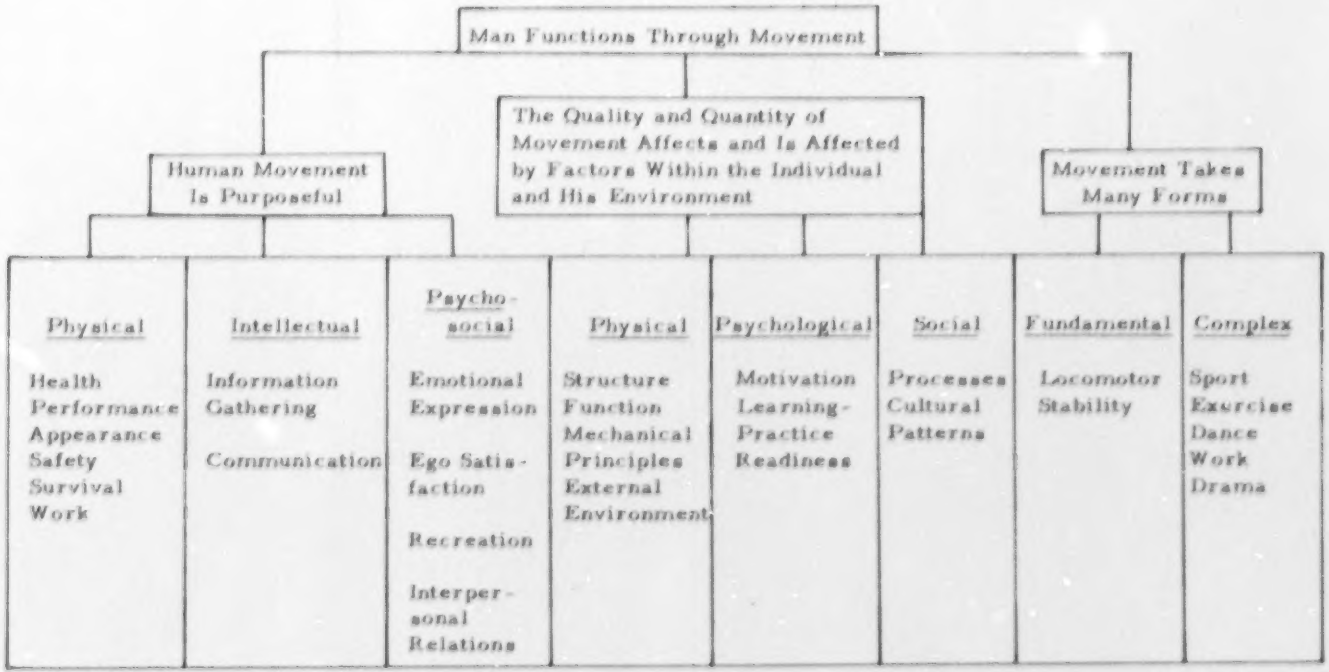
Lessons can also be learned from recent curricular projects in other fields too. In biology, physics, chemistry, math, English and social studies, curriculum workers have developed models structured around basic concepts or major ideas of a field of knowledge. Such structures utilize these concepts at each level as the organizing center. One such example with which many of you are probably familiar is the School Health Education Study (SHES) curriculum.[2] Starting with the concept that "Health is a Quality of Life," this structure organizes around three key concepts - "Growth and Development," "Interaction" and "Decision Making." Ten concepts based on these key concepts serve as the organizing centers of the curriculum at every school level. Sub-concepts and behavioral objectives coupled with long-range goals help structure the materials around which lessons are planned. Knowing the concept to be developed and the objectives to be reached enables one to make rational curricular decisions about what to teach, when to teach it, how to help students learn, materials to be used and how to evaluate.

Unfortunately, very little has been undertaken in the field of physical education of this nature. Unfamiliarity with the concept of such models, their seeming complexity and the notion that physical education is "different" from other subjects are all reasons given for avoiding this alternative. Other than the Battle Creek project and the one shown by Ann Jewett yesterday, only one other conceptual model is being developed to my knowledge. This model, which will be presented for illustrative purposes, revolves around the concept that "Man Functions Through Movement." Three sub-concepts dealing with the purposes of movement, the factors affecting and affected by movement and the forms of movement expand this basic concept. (See Table 5 - next page.) These three sub-concepts give rise to a number of organizing centers that can be used to plan instruction. The current curriculum in most schools, for example, fits under the third sub-concept. Various forms of movement (sports, dance, exercise, etc.) are taught with hopes that the individual will grasp the effects of these forms on himself and his environment (and vice versa) so that he can fulfill his needs or purposes. If we are truly interested in helping the individual fulfill his needs or purposes, we must consider the principle of specificity. Organizing the curriculum around the purposes for which man moves could be exciting and certainly a relevant approach. Imagine a unit on "Movement and Health," or "Communicating Through Movement," or even "Ego Satisfaction Through Movement." What content would you select? Specific sports and games? Or are there some important concepts that would be meaningfully implemented through other movement activities?

It is even conceivable to organize the curriculum around factors affecting and affected by movement. How does one's structure and function

TABLE 5

CONCEPTUAL STRUCTURE FOR STUDY OF HUMAN MOVEMENT



enhance or detract from his movement potential? What role do various social processes play in movement?

This model, which is currently under refinement, probably represents too radical a departure from the traditional scene for most of us to implement at this time. However, the future will see development and evaluation of this and others like it as alternatives to be considered.

Whatever content is selected and however it is organized, it must be implemented in a manner which will enhance not only cognitive and motor development, but attitudes and values as well. Implementation is accomplished through learning activities or experiences. Learning takes place when the learner has a meaningful interaction with his environment. The teacher's role is to manipulate the environment and guide the student through this interaction so that the desired objectives can be reached. Certainly in this area of education we have made great strides and some of it has been utilized by physical educators. Research in learning theory and teacher behavior coupled with advances in educational technology have given us new insights and means for better instruction. Time permits only a brief listing of these practices which are profusely available in the educational literature and marketplace.

The technological advancements in television must be viewed as providing us with one of the greatest instructional tools we have ever had. Whether it be used to present models or demonstrations of performance or provide learners with immediate feedback through instant replay, its value is incalculable.

The availability of 8 mm film cartridges has put expert demonstration at our fingertips. Programmed instruction, using clear and sequential small step guidance through subject matter with immediate feedback at every step, is another potentially potent tool. Instructional systems, learning activity packages and contract learning are other similar techniques for self instruction that can be used to individualize instruction both in pace and content.

The key to the success of any of these techniques is the assumption by the student of some responsibility for making decisions about his own learning. We have heard it argued and demonstrated that when given responsibility, students don't always handle it well. This certainly is true for all students at some stage of their development and some students at many stages of development, but I contend that if we don't provide opportunities for them to try, they will leave their formal education to face the world seriously handicapped by the inability to make their own

decisions. However, one important principle must be followed - this is what I call the "weaning process." When you give a starving person an abundance of food, he tends to gorge himself and become ill. When you give a student total freedom, he likewise may gorge himself to his own detriment. By permitting him to make small decisions, providing him with feedback, and most important, being accepting of his failure, a student can develop the ability to make decisions. Mosston[3] has developed a spectrum of teaching styles which teachers can use to wean students into greater decision making. Yes, some will be faster in this process than others and a few may never make it, but this few should not govern the way you work with the whole group. Patience is a real virtue for both teacher and learner in this activity.

These, and many other processes which provide the learning experiences that enable students to assimilate the content which they can use to achieve the objectives, are available. Seek and ye shall find.

The final component of the curriculum, evaluation, is another area where an abundance of material exists. Tests to evaluate fitness, skill, knowledge, attitudes and many other components of man's structure, function and behavior abound in the literature of physical education. It is not the evaluation techniques that are of great concern - it is the use to which they are put. If we are to determine the effectiveness of our programs, then we must select and use evaluation items that determine how well the student achieved the objectives of the curriculum. Thus we have come to the full circle - back to objectives. For without a valid and clear statement of objectives, meaningful evaluation cannot take place. How often have we seen programs where evaluations of uniform gym suits, showers, attendance and other innocuous criteria are used as a basis for a student's grade, while lofty statements of physical fitness, skill, sportsmanship, etc., pervade the curriculum. Evaluation of students must be based on their attainment of the objectives of the curriculum! If our objectives are clearly stated in terms of observable student behavior this is possible. We may have some objectives in our programs which cannot be evaluated because they don't generally take place in school or at this stage in life. Such objectives as participation out of class or later in life are examples of this type. This does not mean that they are unimportant, but let's be honest and admit that although we are teaching for them, we are unable to determine if a student attains them for the aforementioned reasons.

Another issue that faces us today is that of grading. The pass-fail grade as opposed to five letter grades has been debated. If an objective is well stated, a student either achieves it or he doesn't. Why is it

necessary to have some arbitrary qualitative scale for partial achievement of an objective? The only rationale for partial credit is if he achieves only a portion of the number of stated objectives.

The attendance at this conference, particularly by secondary school personnel, is indicative of the interest in physical education curriculum. The rapid change in our society has challenged our programs and methods. My hope, as we leave this conference, is that we will take a good hard look at our curricula and ask ourselves why we are doing what we do. If we can put ourselves in the role of the learner and honestly say that our programs are meaningful, then we should continue a good job. However, if we are forced to question some of our practices, then maybe we should consider some of the alternatives suggested at this conference and follow the advice of a current TV sage when he says "Try it. You'll like it!"

Notes

1. Homel, Steven R. and Thomas Evaul, Needs Approach to Health Education (Bala Cynwyd, Pa., 1968).

2. Health Education, A Conceptual Approach to Curriculum Design (St. Paul, Minn.: 3M Education Press, 1967).

3. Muska Mosston, Teaching Physical Education (Columbus, Ohio: Charles E. Merrill, 1966).

BIBLIOGRAPHY

Pre-Conference Encounter

Compiled by
Donald A. Read
University of Massachusetts

Berne, Eric. Games People Play. New York: Grove Press, 1964. Dr. Berne offers the reader a thorough, fascinating analysis of 36 games which people play in groups or individually.

Fairfield, Roy P., ed. Humanistic Frontiers in American Education. Englewood Cliffs, N. J.: Prentice-Hall, 1971. This book offers new understanding of directions and goals, explores the forces shaping the future, and traces the birth of humanistic revolution to the impact John Dewey had upon education.

Fast, Julius. Body Language. New York: J. B. Lippincott, 1970. This book explores the new science of nonverbal communication, called kinesics, and how the body gestures project one's most hidden thoughts.

Frankl, Viktor E. Man's Search for Meaning. New York: Washington Square Press, 1968. A revolutionary concept that adds a new dimension to the theories of Freud and Adler. This book develops a new theory, called logo therapy.

Gazda, George M. Basic Approaches to Group Psychotherapy and Group Counseling. Springfield, Ill.: Charles C. Thomas, 1968. This book summarizes such fundamental group psychotherapy positions as psychodrama, psychoanalysis, behavior therapy.

Golembiewski, Robert T. and Arthur Blumberg. Sensitivity Training and the Laboratory Approach. Itasca, Ill.: F. E. Peacock Publishing Co., 1970. This book contains 37 selected articles and extensive editorial comments to provide a "stereophonic" view of the laboratory approach. The book illustrates basic T-group dynamics.

Goffman, Erving. Behavior in Public Places. New York: Free Press, 1963. The purpose of this book is to develop a framework capable of dealing with an almost neglected area of social reality, behavior in public and semipublic places.

_____. Encounters. New York: Bobbs-Merrill, 1961. This book takes a look at the encounter group movement including group psychotherapy and especially small group analysis.

Greenberg, Herbert M. Teaching with Feeling. New York: Macmillan, 1969. This book focuses on the inner life of the teacher rather than the emotions of the learner. The author stresses "honesty, spontaneity and variety." That is truly teaching at its best.

Gunther, Bernard. Sense Relaxation Below Your Mind. New York: Collier, 1968. A book which deals with sensory awakening as a method which can help bring back one's senses: to quiet excessive thought, to release chronic tension, to enhance direct sensory reality in the here and now.

_____. What to Do Till the Messiah Comes. New York: Macmillan, 1971. This book demonstrates Gestalt therapy, group encounter, verbal and nonverbal ways to work through "destructive" behavior patterns and mind/body/energy blocks.

Gustaitis, Rasa. Turning On. New York: Macmillan, 1969. One woman's trip beyond LSD through awareness-expansion without the use of drugs. Included are discussion on truth-labs, Gestalt therapy, meditation, Zen, sensory awareness, hip communes, brain-wave control.

Howard, Jane. Please Touch: A Guided Tour of the Human Potential Movement. New York: McGraw-Hill, 1970. The author took part in over 20 different encounter groups - among them an interracial workshop, a nude marathon, a Synanon, and a weekend of "aggressive dating."

Lowen, Alexander. The Betrayal of the Body. New York: Collier, 1967. This book charts a new course toward emotional fulfillment through body awareness and the recovery of a gratifying mind-body relationship.

Luft, Joseph. Group Processes. Palo Alto, Calif.: National Press, 1970. Starting with the assumption that behavior is best understood in the context of interpersonal ties, the author establishes a basic framework within which components of the communication process may be viewed.

Lyon, Harold C. Learning to Feel--Feeling to Learn. Columbus, Ohio: Charles E. Merrill, 1971. A factual, down-to-earth book, giving straightforward accounts of the results experienced by the author as he tried out novel methods of bringing the whole student into the classroom, with the feeling aspects of himself, the intellectual aspects, and the capacity for self-responsibility.

Mann, John. Encounter: A Weekend with Intimate Strangers. New York: Groseman Publishers, 1969. A book about a group of strangers who meet for a weekend encounter group and freely act and talk out their feelings.

Maslow, Abraham H. Religions, Values, and Peak-Experiences. New York: Viking, 1970. Maslow articulates on one of his prominent theses: the "religious" experience is a rightful subject for scientific investigation and speculation and, conversely, the "scientific community" will see its work enhanced by acknowledging and studying the species wide need for spiritual expression which, in so many forms, is at the heart of "peak experiences" reached by healthy, fully functioning persons.

Montagu, Ashley. Touching: The Human Significance of the Skin. New York: Columbia University Press, 1971. Ashley Montagu presents a lively inquiry into the importance of tactile experience in the development of the person.

Perls, Frederick S. Gestalt Therapy Verbatim. Lafayette, Calif.: Real People Press, 1969. Perls, the originator and developer of Gestalt therapy, gives a clear explanation in simple terms of the basic ideas underlying this method, which at the same time makes a contribution to existential philosophy.

Rogers, Carl. On Encounter Groups. New York: Harper & Row, 1970. Rogers brings his focus to bear on the encounter group - the most rapidly spreading and potent social invention of this century. What has brought about this spread? Why do those in encounter groups experience a closeness which they have not felt even with husbands or wives or longtime friends? These are just a few of the questions that the author explores.

_____ and Barry Stevens. Person to Person. Lafayette, Calif.: Real People Press, 1967. Professional papers by Rogers and others - about therapy, experiencing and learning - are set in a matrix of personal response and the use that Barry Stevens has made of these papers in arriving at better understanding of herself, and her view of the problem of being human as she has encountered it in her life.

Seavson, S. R. An Introduction to Group Therapy. New York: International Universities Press, 1970. A report on a group therapy project.

Shepard, Martin and Marjorie Lee. Marathon 16. New York: G. P. Putnam's Sons, 1970. This book presents a bold, fascinating new concept in psychotherapy, offered in a dramatic and highly readable form.

Siroka, Robert W.; W. K. Siroka; and G. A. Schloss. Sensitivity Training and Group Encounter. New York: Grosset's Universal Library, 1971. The book discusses new approaches to greater awareness and deeper perception of one's self and others through T-groups, attack therapy, psychodrama, marathons.

REGIONAL CONFERENCE ON CURRICULUM IMPROVEMENT IN

SECONDARY SCHOOL PHYSICAL EDUCATION

Reaction Sheet (to be returned
following Conference Luncheon)

To provide a means for evaluating this conference, the planning committee needs your opinion concerning the activities you attended during these three days. Such information will be summarized and will help in planning future conferences. Please give us your time and consideration in answering the following:

1. In general, I found the Conference to be:
(check one)

20 of significant value

68 much value

24 some value

8 little value

0 no value

2. With regard to purpose "To assist in the understanding and gain insight into the process of curriculum development as it relates to physical education programs," this objective was accomplished to:

15 a great extent

66 a considerable extent

28 a moderate extent

10 a limited extent

1 little or no extent

Request for Continued Interaction

At the close of the conference, a special request was made to develop a mechanism which would permit the exchange of ideas relative to innovations in secondary school physical education programs.

Interested professional physical educators are invited to forward innovative ideas to:

Elizabeth Arnold
Bangor High School
Bangor, Maine 04401

Communications should consist of a short descriptive paragraph. Those desiring a listing of the ideas submitted by others should enclose a self-addressed, stamped envelope.